DRUG KNOWLEDGE LEVELS AND DRUG ABUSE ATTITUDES AMONG FIFTH AND SIXTH GRADE STUDENTS OF DENTON AND KEENE, TEXAS

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Nations, James D., Drug Knowledge Levels and Drug Abuse Attitudes Among Fifth and Sixth Grade Students of Denton and Keene, Texas, Master of Science (Sociology), May, 1972, 89 pp., 15 tables, bibliography, 25 titles.

The problem with which this investigation is concerned is that of determining the drug knowledge levels and attitudes toward drug abuse of fifth and sixth grade schoolchildren. The population consists of 163 fifth and sixth grade students of Denton and Keene, Texas. Fifty-seven children from Keene Adventist Elementary and 106 children from Stonewall Jackson Elementary (Denton) and Jefferson Davis Elementary (Denton) responded to a 55 item questionnaire that included 15 questions designed to test the amount of correct information about drugs and drug abuse that each child possesses and 19 questions that measure each child's attitude toward drug abuse.

Following an introduction to the problem (Chapter I) and a review of the relevant literature (Chapter II), seven hypotheses are proposed (Chapter III). Chapter IV presents the results of the study, obtained by chi square testing of scores achieved by the children on the drug knowledge level scale and attitude toward drug abuse scale.

Significant statistical support is not obtained ($p < .10$) for Hypothesis one, that school children of a

heterogeneous city (Denton) will display higher levels of correct knowledge about drugs than will schoolchildren of a homogeneous city (Keene). The opposite holds true. Because neither city has instigated formal drug education programs, individual teachers are probably responsible for the majority of the knowledge about drugs obtained by the tested schoolchildren, and the Keene teachers have apparently placed more emphasis on drug education than have the Denton teachers.

Hypothesis number two, that schoolchildren of a heterogeneous city (Denton) will display more tolerant attitudes toward drugs than will respondents of a homogeneous city (Keene), is also not significantly supported by the data ($p < .70$). Such a result is probably obtained because Hypothesis number four, that respondents showing high levels of correct drug knowledge will display more tolerant attitudes toward drugs than will respondents with low levels of correct drug knowledge, is not significantly supported ($p < .05$). The higher the level of drug knowledge for these schoolchildren, the more intolerant is their attitude toward drug abuse. Because Keene respondents possess more correct drug knowledge than do Denton respondents, they also possess more intolerant attitudes.

Children with high levels of correct drug knowledge probably possess intolerant attitudes toward drug abuse

because most of their knowledge about drugs is obtained, as the data show, from parents and from the school--places from which a child is not likely to obtain tolerant drug abuse attitudes.

Hypothesis number three, that racial minority group respondents will display more tolerant attitudes toward drugs than will white respondents, is supported by the study's data ($p < .05$). This result is attributed not to the race variable, but to the statistically supported statement ($p < .10$) that white schoolchildren possess higher levels of correct knowledge about drugs than do minority group children.

Church affiliation is shown to have a significant ($p < .005$) effect on schoolchildren's drug knowledge levels (Hypothesis number six), but to have no significant effect on schoolchildren's attitudes toward drug abuse (Hypothesis number seven, $p < .50$). Either the church has more influence in instilling correct drug knowledge in children than the respondents have noted, or socio-economic factors related to some church denominations result in higher knowledge scores on the part of their child members than they do for other church denominations. A child's attitude toward drug abuse is apparently not significantly within the sphere of influence of his church denomination.

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THESIS

Presented to the Graduate Council of the
North Texas State University in Partial
Fulfillment of the Requirements

For the Degree of

MASTER OF SCIENCE

By

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Denton, Texas

May, 1972

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CHAPTER I

INTRODUCTION

Few social problems have been examined to such an extent as the recent increase in the abuse of drugs by young people in the United States. Several hundred books have recently been published, ranging in approach from the anti-drug texts of some school, government, and medical groups to the "drugs as a means to cosmic consciousness" publications of proponents such as Allan Watts and Timothy Leary.

Popular magazines each year publish myriad articles dealing with the subject of drug usage in American society. National television corporations air hour-long specials on the topic, and the local channels answer with "the situation in our town," while radio stations blast the air with various glorifications of the use of drugs and underground newspapers publish weekly "drug market reports" for the perusal of their long-haired readers. Campaigning politicians decry drug abuse as the cause of "the increasing crime wave," while a college student inscribes on a campus sidewalk the words of the drug-culture poet, Allen Ginsburg: "Pot is fun."

Illustrating the concern over drug abuse, the Texas Legislature declared last year that beginning September 1,

1971, every Texas student in grades five through twelve shall have classroom drug education, taught by teachers who must themselves attend instruction sessions on the abuse of drugs.

Hesitantly begun on university campuses only a few years ago, "the drug revolution" has already swept the nation's high schools. "The use of drugs, particularly marijuana, is now an accepted fact of life for anywhere from 30 to 50 per cent of all U.S. secondary-school children (9, p. 66)."

With the school anti-drug programs apparently ineffective, not only are more students using drugs, but the age at which their use begins is radically dropping. In Fairfield, Connecticut, school officials met in the spring of 1970, with a group of junior-high school students for a session on drug abuse. The educators in charge distributed among the group four rolled marijuana cigarettes for the students' examination. At the end of the session, when the officials asked for the marijuana cigarettes to be returned, the students reached in their pockets and returned seven (9, p. 67).

With no apparent indication in sight of an amelioration of youthful drug use, this problem, as it has in the past, will probably be compounded before it dissipates. At present, larger numbers of youth are experimenting with and regularly using drugs, and, as a result, through the mass media, peer group communications, their parents, and even

their churches and schools, larger numbers are learning about drugs and the abuse of drugs. The resulting attitudes and beliefs of these children are laying the basis for their future action, ranging possible from experimentation with or addiction to drugs, to a revulsion against drugs based on neurotic fears and ignorance.

It is the purpose of this study to examine the extent of knowledge about and the attitudes toward drug abuse among a sample of fifth and sixth grade children--to date, the youngest group of children to be questioned on this topic.

Statement of the Problem

The public of the United States has come to believe that a drug problem among youth does exist. Americans have been informed that heroin addiction alone has risen recently to 300,000 members of their society, and that of the 1,205 total narcotic related deaths in New York City alone last year, 237 of them were the deaths of teen-age drug users (10, p. 27). The news media have informed the nation that the average age for discovered drug addicts has dropped from 35 in 1950 to 23 today (10, p. 29), and the Dean of the Columbia College has said that he "wouldn't be astonished if the number of marijuana users at Columbia turned out to be one-third of the student body" (6, p. 27).

Also, Blum reported that up to 1963,

> . . . the students who were primarily interested in psychoactive substances, were, it appeared, mostly graduate students, but as the years have passed, the statistics as well as clinical and journalistic observations have implicated increasingly younger student groups. Undergraduates first became--and remain--a focus of concern, then high school students, and nowadays even some grade school pupils are also described as prone to use illicit exotic drugs (2, p. 3).

Blum also reported that, according to statistics from metropolitan centers like Los Angeles, Boston, San Francisco, and New York, while it took approximately ten years for experimentation and use of drugs to shift from,

> . . . the older intellectual-artistic groups to graduate students, it took only an estimated five years to catch on among undergraduates, only two or three years to move to a significant number of high school students, and then, within no more than two years, to move to upper elementary grades--although we have no sound data as yet on the numbers involved in elementary schools (2, p. 362).

The result of the vastness of the problem, as the American people see it, has been in addition to large-scale legislation, a deluge of publications related to the use of drugs by American youth. The majority of these publications are repetitious, generally beginning with a definition of the term "drug" and proceeding to delimit the various forms of drugs--the opiates, hallucinogens, amphetamines, barbituates, and euphoriants, and generally concluding with statistics on the enormity of the drug problem. Examples of this type of publication are Drugs and the Young (6), The College Drug Scene (4), Drugs and Youth (12),

The Willing Victim (3), The Drug Scene (8), Society and Drugs (1), and Drug Abuse (7). Also, although many of these works center chapters around the subject of the abuse of drugs by young people, most are directed toward an examination of drug use in general, the titles composed perhaps in order to make the book more timely.

There are several publications, however, that are scientifically constructed social surveys of drug abuse among young people. The most notable composiums are The Road to H (5), which deals exclusively with young male heroin addicts of New York City between 1949 and 1954, and Schoolchildren and Drugs (11), a 1970 English publication. While the former book cited is, at best, somewhat obsolete to be employed as a reference to "the drug revolution," and the latter is not applicable to American society, it is only with these two studies that one begins to find references to young peoples' knowledge levels and attitudes about drug abuse. However, neither of these works employ subjects extending in age below twelve years, and in addition, are mostly concerned with the attitudes and knowledge levels of actual drug users.

There are apparently no studies, either in sociological or psychological journals or in mass media publications, that attempt to analyze the attitudes or knowledge levels of young persons who are not known to be drug takers. It was partly for that reason that this examination was

proposed. Of the hundreds of drug abuse related studies that have been conducted, apparently none has sought to question the knowledge and beliefs of any of the millions of American grade school children. This is a shortcoming in sociological research, for it is very likely within the perceptions of these new members of society that the solution or expansion of the youth drug problem lies. Before teachers, administrators, legislators, and parents can begin to educate properly the elementary schoolchildren on the aspects of drug use, they must first have some knowledge as to what these children already know and what they hold to be true about the subject of drugs. By examining the knowledge levels and attitudes of a sample of these students, all of whom are still in the process of anticipatory socialization, the cited authorities can perhaps realize what type of drug education to engage in the socialization of these students, and when this socialization is best begun. It is through pioneer studies of this sort that one may begin to piece together information that may be of use in further research that attempts to understand the drug problem, and perhaps to begin to understand certain motivations or causes of our society's youth drug problem.

The problem with which this examination is concerned, then, is simply stated--what are the attitudes and knowledge levels of the tested elementary school students when concerned with drugs and drug abuse? In addition to an

attempt to provide information in answer to the above question, this study will examine possible answers to the following questions:

(1) What are the differences in the knowledge levels between the students of Denton and those of Keene?

(2) What are the differences in attitudes toward drugs between the students of Denton and those of Keene?

(3) From where does the drug knowledge emanate for each of these sample populations?

(4) What are the differences between the sources of drug knowledge for the two tested populations?

(5) What differences exist in both knowledge levels and attitudes between white and racial minority group respondents?

(6) What effect does church denomination have on drug knowledge levels and attitudes?

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CHAPTER II

REVIEW OF THE LITERATURE

The published literature on drugs and drug abuse consists of some several thousand works. Even when limiting the subject to drug use within the United States, the investigator is confronted with almost one thousand publications, including several hundred books and seemingly innumerable articles in both social science journals and lay magazines; and almost any metropolitan newspaper published within the past year contains at least one article on some aspect of contemporary drug use in the United States.

The examiner who is interested in a relatively comprehensive history of drugs and a review of general drug-related works should be referred to the two volume work of Richard Blum and associates entitled Society and Drugs (2), and Students and Drugs (3), publications which to date probably cover these subjects most systematically.

By narrowing the topic of reference to the abuse of drugs among young people, one can begin to present a quasi-comprehensive review of the existing literature, though even within this denotation, he must be prepared to examine

well over one hundred volumes. "Drug abuse," as George Birdwell wrote in The Willing Victim, "is hot news" (1, p. xi).

The vast majority of this news, however, and the majority of the hundred or more publications on youthful drug abuse, have little relation to this study. The works, for the most part, are designed for non-social scientist readers and, as previously stated, are highly repetitious. Usually, the works are intended to advise the reader of the manifestations and consequences of drug use by young people. Excellent examples of this type of publication are The Drug Dilemma (6), The Dope Book (9), and The Pleasure Seekers (8).

Sociological studies on drug usage that employ young people as a sample population are extremely rare. Most notable among the existing studies, though, are the publications of Chein (4, 5), Weiner (13), and Blum (3). These reports concern themselves, however, almost exclusively with youth who are recorded as actual drug users.

Isador Chein wrote in 1956 that when he began investigating juvenile drug use four years earlier, he was "exploring a virtually unknown territory" (4, p. 50). In 1970, fourteen years later, Weiner concluded that among the existing sociological studies on drugs and youth, few had direct bearing on the problems of discovering drug-taking patterns among school-age children (13, p. 38).

Chein's pioneer work, however, had provided a study of 2,950 male heroin users in the 16 to 20 age bracket, developed into a case file from the courts and municipal hospitals of Manhattan, Brooklyn, and the Bronx in New York City in the period of time from the first day of 1949 to the last day of 1954 (5, p. 10). This vanguard research led Chein to state that drug use among juveniles in New York City [then and today the home of the largest number of heroin users in the United States (11, p. 205)] was most frequently found in the most deprived areas of the city. "In the early 1950's, 15 per cent of the census tracts in the three boroughs, containing less than 30 per cent of the sixteen- to twenty-year-old boys, contributed over 80 per cent of the cases of involvement" (5, p. 10). He also found that the areas of highest drug use were those inhabited primarily by certain ethnic groups, mainly Negro and Puerto Rican (5, p. 47).

Articles dealing with drug use by juveniles appeared only sporadically during the early 1960's, and these were mostly concerned with what have usually been considered lesser problems. Examples of these kinds of articles are the publication of Massengale in 1962 on glue sniffing in children (10, and the publication on gasoline inhalation that appeared in Pediatrics a few months later (7).

One of the first sociologically conducted questionnaire surveys took place in 1967 in Castro Valley,

California (in the San Francisco Bay area), a study which revealed that of eleventh and twelfth grade students in two tested high schools, 35 per cent of the males, and 22 per cent of the females had experimented with marijuana; 15 per cent of the males and nine per cent of the females had ingested LSD-25; and 22 per cent of the males and 18 per cent of the female students had taken amphetamines (3, p. 13).

A larger scale study in the same year, covering all students in San Mateo County, California, high schools, indicated that 32 per cent of all students surveyed had smoked marijuana, and 17.6 per cent of the students had used it more than ten times. Ten per cent declared that they had taken LSD-25 (3, p. 14).

In early 1970 Blum stated that there were still no sound data on the use of drugs by elementary school children (3, p. 362). Later that year, however, a University of London graduate student, R. S. P. Wiener, published a dissertation entitled Schoolchildren and Drugs, which utilized 1,093 London area students ranging in age from twelve years to eighteen years, in an attempt to differentiate drug-takers from non-drug-takers by means of a score of variables (13, p. 154). The study embodied twelve schools, of which four contained an elementary grade level. In his testing, Wiener discovered that 5.39 per cent of the respondents had taken drugs, although the majority of these

were in the group of older subjects (13, p. 154). The main body of his study concentrated on the characteristics of that small minority.

Apparently, it is chiefly in the studies of Chein and Wiener that sociological tests are to be found of either drug knowledge levels or attitudes toward drugs, although it should again be emphasized that the findings of these works deal primarily with admitted drug users.

Chein discovered as a result of his work, that drug knowledge was related to the degree of heroin usage incidence in any one area. He found, for instance, that in high drug use areas, all subjects, whether delinquent or not, had some degree of drug knowledge, while in the low drug use areas only the delinquent group had this knowledge (5, pp. 97-98). Chein wrote that the hope is often expressed that effective information on the dangers of addiction to heroin may act as a deterrent to drug use. Some of the statements made by the heroin users he interviewed supported such hopes. For example, one of them said:

> If I had known that it would blow up everything . . . . Those kids just passed it around like it was nothing. Everybody was taking it, just sniffing it, didn't know anything about it. I never would have tried the junk. I tried it because I didn't know anything about it. No one in my neighborhood knows anything about it. That's what they need--education--so that kids know what the stuff can do. It can blow everything up in your face (5, p. 155).

Chein reported that only 17 per cent of the heroin users stated that they had learned anything cautionary about drugs before they first used them, whereas most (79 per cent) of the delinquent non-users said they had learned such things before the age of sixteen, the age which Chein determined was the median for first use of heroin by his subjects (5, p. 155).

According to Chein's report, the three points the non-users most frequently cited as the deciding factors in their decision not to use heroin were health, the cost of the habit and the need to resort to illegal activities, and the belief that use of the drug would lead to a deterioration of character (5, p. 156).

As Wiener states, "In the non-heroin field, virtually nothing is known about the relationship between drug knowledge and usage" (13, p. 62). Scher discovered, however, that few campus cannabis users switch to opiates because the students are aware of the dangers (12, p. 541). Wiener found the same fear of heroin in his study (13, p. 62).

Concerned with both opiate and non-opiate derivative drugs, Wiener stated that, because in his study, in only seven of 46 drug knowledge questions did over 50 per cent of the sample give the correct response, that "there is a lack of knowledge about drugs among school children" (13, p. 134). He went on to say, however, that in only four of the questions did more than 25 per cent of the subjects

give the incorrect answer. "Therefore," he concluded, "even though there might be an absence of accurate knowledge about drugs among school children, there is also an absence of inaccurate knowledge" (13. p. 134).

Wiener therefore hypothesized in his examination that, "The more specific and accurate the drug knowledge school children have, the more likely they are to take drugs" (13, p. 62). He discovered in scoring the responses to the questionnaire's knowledge level scale that there was a significant difference between the drug-takers and non-drug-takers. The data therefore supported his hypothesis (13, p. 131).

Chein found that boys possessing the least amount of correct information about drugs and their consequences were generally those from the neighborhood in New York City in which drug use was most widely prevalent. He also found that despite their lack of correct drug information, these subjects generally held the most tolerant attitudes toward drugs among all the subjects tested (4, p. 55).

Concerned with attitudes of schoolchildren toward drugs in his study, Wiener hypothesized that the more favorable the children's attitudes toward drugs, the more likely they are to take drugs. In analyzing his subjects' responses to the seventeen Likert Scale attitude questions, Wiener found that the data supported this hypothesis (13, p. 68).

Suffice it to say, then, that despite the American public's powerful interest and concern about drug abuse among the nation's youth, there have been only a very few drug studies conducted that examine the knowledge levels and attitudes about drug abuse among youth and none which deal specifically with elementary schoolchildren. The subject with which this survey is concerned has been grossly neglected in sociological literature.

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CHAPTER III

RESEARCH HYPOTHESES AND METHODOLOGY

The hypotheses of this work are primarily the outgrowth of information from the publications cited in the two previous chapters. However, this survey probably tests all of these hypotheses for the first time.

Drug Knowledge

Denton is situated in the northern part of Texas, thirty-five miles from Dallas and thirty-eight miles from Fort Worth. With a population of 30,000, the city is the location of some 17,000 university students, approximately 14,000 at North Texas State University and 3,000 at Texas Woman's University. The city is influenced by the various common political factions, and contains within the city limits eighteen different church denominations. Some federal narcotics agents contend that the city is a leading drug center for the south-western United States (3, p. 1). Illustrating the extent of drug usage in Denton are the statistics showing that in 1970 there were 277 persons arrested on 221 offenses concerning illegal drugs. In May, 1971, there were 68 drug offenses entered on city records for the year (3, p. 2).

In contrast, Keene, Texas (located 31 miles south of Dallas and 83 miles south of Denton), is a relatively homogeneous community of approximately 2,440 inhabitants, of whom approximately 96 per cent are members of the Seventh Day Adventist Church. This is the only church denomination represented in the city limits of Keene. The city is also the site of a conservative, religiously-oriented Seventh Day Adventist college, and there is but one elementary school, the Keene Adventist Elementary, which is church supported. Last year in Keene there were no drug arrests made for drug related offenses, and there have been none thus far (November, 1971) this year. (See Appendix III.)

The school system of neither town has instigated formal drug education programs; rather, in all three elementary schools surveyed, the drug education that has been enacted has been the result of individual teachers' own initiatives within the confines of their respective classrooms.

Because of the emphasis placed on drug-related subjects in newspapers (including underground publications sold in Denton), the size of the compared cities, the presences of the large number of university students in Denton, the compared number of drug arrests, and the more heterogeneous population of Denton, it is hypothesized that

> Hypothesis 1. Schoolchildren of a heterogeneous city will display higher levels of correct knowledge about drugs than will schoolchildren of a homogeneous city.

Tolerance Toward Drugs

The majority of the factors leading to the formulation of Hypothesis 1 are also applicable to the formulation of Hypothesis 2. Additionally, though, certain previous findings can be related to the latter hypothesis. Chein discovered, for example, that the most tolerant attitudes toward drugs existed among boys in the highest drug use area he examined (1, p. 12). Wiener discovered that the more specific and accurate the drug knowledge schoolchildren have, the more likely they are to take drugs (10, p. 68).

The probable fact of a higher incidence of drug use in Denton (a heterogeneous community) combined with the assumption that Denton respondents will display more correct drug knowledge than Keene respondents (residents of a homogeneous community), produced this hypothesis:

> Hypothesis 2. Schoolchildren of a heterogeneous city will display more tolerant attitudes toward drugs than will respondents of a homogeneous city.

Racial Attitudes Toward Drugs

John A. Clausen wrote in 1966 that

> Nearly three-fourths of the active addicts recorded by the Bureau of Narcotics are Negro, Puerto Rican, or Mexican-American in extraction. Thus, the problem of narcotics use in the United States is now closely entwined with minority-group status (6, p. 206).

In 1971, the Bureau of Narcotics and Dangerous Drugs reports, however, that 51 per cent of all addicts are white (8, p. 29). "It may have been true two decades ago that

skin color, social class and family disruption provided correlations with drug addiction," reported Dr. Matthew P. Dumont, the head of drug rehabilitation for the Massachusetts Mental Health Department, "but it is not true today. Now it's openly and unashamedly a peer-group phenomenon" (8, p. 30).

Considering this recent change in the relationship between minority status and drugs, in addition to indications that most non-heroin drug users are non-minority group members, it is likely that Caucasian elementary schoolchildren possess either similar or perhaps more tolerant attitudes toward drugs than do minority group children of the same age. In order to test this relationship, however, the following hypothesis is proposed for analysis:

> Hypothesis 3. Racial minority group respondents will display more tolerant attitudes toward drugs than will white respondents.

Effect of Knowledge Level on Attitude

The relationship between knowledge level on drugs and attitude toward drugs, as indicated in the previous chapter, appears to be relatively complex. For instance, Leech and Jordan stated that many people begin experimenting with drugs in ignorance, "not knowing what the drugs are, or what they are supposed to do or how many to take to get the desired effect" (10, p. 61). In congruence with this

opinion, O'Donnell and Ball reported in Narcotic Addiction that "ignorance and curiosity are two of the necessary ingredients for initiating drug use" (10, p. 61). And, as cited above, Chein discovered that only 17 per cent of his studied heroin users had learned anything cautionary about drugs before using them (1, p. 155). He also found that

> . . . boys from the neighborhood in which drug use is more widely prevalent hold the most tolerant attitudes toward drugs and drug users, but at the same time are least likely to possess correct information about drugs and their consequences (2, p. 55).

In contrast, however, Harms reported in Drug Addiction in Youth the "surprising discovery" that there existed "widespread detailed knowledge" about drugs and druglike pharmaceuticals among young drug users who were not in high school or the early years of college (5, p. 3). Some of their knowledge, Harms wrote, was acquired from hearing discussions on the subject of drugs, or came from some "big shot" who "knew all about it."

> There was a considerable amount of professional literature in the hands of these youngsters. Copies of the PDR (Physicians' Desk Reference), for example, which are easily obtainable in the larger second-hand bookshops, were frequently encountered. Occasionally, reference books on drugs, toxicologies, and pharmacologies were in the possession of these youths, who studied them with more or less care (5, p. 4).

In addition, the data of the only apparent study recently conducted (Wiener, 1970), supported the hypothesis that the more specific and accurate the drug knowledge schoolchildren have, the more likely they are to take drugs.

Wiener discovered a significant difference (.01 level of significance) in the level of correct drug knowledge possessed by drug takers and the level possessed by non-drug takers (10, p. 131).

As a result, it was concluded that additional information related to the interrelation of drug knowledge and attitudes toward drugs is needed. The hypothesis to be tested is the following:

> Hypothesis 4. Respondents showing high levels of correct drug knowledge will display more tolerant attitudes toward drugs than will respondents with low levels of correct drug knowledge.

Effect on Attitude of Acquaintance with Drug Users

Among eighth grade students in Manhattan, Brooklyn, and the Bronx (in the 1950's, the areas of highest drug use in New York City), Chein reported, 45 per cent claimed personal acquaintance with a heroin user (1, p. 84). Of the two groups, delinquent and non-delinquent, into which Chein divided his population of young males, among those delinquents who did not become heroin users, two-thirds were offered an introduction to heroin use before the age of 18; among those who did become users, 68 per cent had the opportunity to take heroin by the age of 16 (1, p. 153). Whereas Chein disclosed that half of the sampled boys who possessed the most tolerant attitudes toward drugs knew at least one heroin user personally (2, p. 55), he found that

all non-drug takers said that all of their friends who mattered most to them held negative attitudes toward drugs (1, p. 145).

In addition, Wiener discovered that the more people schoolchildren know who have taken drugs, the more likely they are to take drugs themselves, and that the more times schoolchildren have been in the company of other children who have taken drugs, the more likely they are to take drugs (10, p. 124).

Assuming, then, that a tolerant attitude toward drugs is generally present in youngsters who do take drugs, it logically follows that if children who know people who take drugs are more likely to take drugs than are children who know no drug users, that children who are acquainted with drug users are more likely to possess tolerant attitudes toward drugs than are children who are not acquainted with any drug users. Hypothesis 5, then, is stated:

> Hypothesis 5. Respondents acquainted with one or more drug users will display more tolerant attitudes toward drugs than will respondents who know no drug users.

Effect of Church Affiliation on Knowledge Level and Attitude

It is not expected that a child's church affiliation, or lack of it, will have a significant effect on his drug knowledge level or attitude toward drugs. The church is probably a significant factor in the development of the

general attitudes of an elementary schoolchild, but because drug education is a subject that usually falls outside the realm of church influence, membership (or lack of it) in a particular church denomination probably has little measurable effect on a child's drug knowledge level or attitude toward drugs. It is possible, though, that particular church denominations may tend to instill in children more intolerant general attitudes than would other church denominations. And it may be true that children of some church denominations, because of socio-economic factors, perform higher on general knowledge tests than do children of other church denominations. (By "general" attitudes are meant those concerning a variety of subjects, such as attitudes on race relations, use of alcohol, and change in general, instead of attitudes toward drug abuse in particular. "General" knowledge also denotes a broader range of subjects than drug knowledge alone.)

In order, then, to determine whether or not affiliation with a church or with a particular religious denomination has effect on schoolchildrens' attitudes toward drug abuse or drug knowledge levels, the following null hypotheses are proposed:

Hypothesis 6. Church affiliation will have no effect on schoolchildrens' drug knowledge levels.

Hypothesis 7. Church affiliation will have no effect on schoolchildrens' attitudes toward drug abuse.

Definitions of Drug Terminology

Before discussing the testing of the hypotheses of the preceding section, it is essential first to define terms previously used and terms that are used in the explanation of the results of this study.

The term drug, by a Webster's Dictionary definition, is "any substance, vegetable, animal, or mineral, used in the composition or preparation of medicines." Although the questionnaire of this survey employs questions (numbers 42 and 45) for which this definition is sufficient, the contemporary colloquial use of the term drug makes it necessary to declare another definition. With the exception of the above cited questions, the definition used in this study is the one offered by Laurie: ". . . any chemical substance that alters mood, perception, or consciousness and is misused, to the apparent detriment of society" (10, p. 3).

Drug abuse, however, is not merely the misuse of a particular substance. Rather, for the purpose of this examination, drug abuse shall be defined as a pattern of behavior in which drugs are used non-medically to alleviate some pain or distress or to achieve some other purpose--for example, a sense of euphoria, a detachment from personal problems, or a mystical or religious experience.

The term drug addiction is not employed in the questionnaire of this survey, but because it is implied on a number of occasions, it is best that the word be

elucidated. This report accepts the definition of the World Health Organization, which states that drug addiction is

> . . . a state of periodic or chronic intoxication detrimental to the individual and to society, produced by the repeated consumption of a drug (natural or synthetic). Its characteristics include: (1) an overpowering desire or need (compulsion) to continue taking the drug and to obtain it by any means; (2) a tendency to increase the dose; (3) a psychic (psychological) and, sometimes, a physical dependence on the effects of the drug (6, p. 195).

Other slang drug terms employed in the questionnaire and their definitions follow:

joint--marijuana cigarette

turning on--to become under the influence of drugs

pot--marijuana

busted--arrested for use or possession of drugs

speed--methamphetamine

pusher--drug peddler

All the above definitions are found in the United States government printed A Federal Source Book: Answers to the Most Frequently Asked Questions About Drug Abuse (4).

Terms employed in the use of the attitude and knowledge level scales are defined and explained in the following subsection of this chapter.

Methodology

The Sample

The sites selected in which to conduct this study of the knowledge levels and attitudes of elementary school-children concerning drug abuse were Denton, Texas, a medium sized, relatively heterogeneous city with an apparent high number of illegal drug users, and Keene, Texas, a smaller, more homogeneous community with only one church denomination and, apparently, an extremely low incidence of drug abuse. Keene is the home of only one primary school, the Keene Adventist Elementary School, but it was necessary to choose two specific schools from the many in Denton.

Interviews in April, 1971, with administrators of the Denton Independent School District resulted in a choice of two elementary schools from three that were offered. Officials of the first school contacted, Sam Houston Elementary, were obligated to decline the proposed study for lack of available time. Principals of the two remaining schools, Jefferson Davis Elementary and Stonewall Jackson Elementary, agreed to make classes available for the study.

It had been previously determined to employ one sixth grade class and one fifth grade class from each Denton school. These specific grades were chosen because the fifth and sixth grades generally include the oldest and

most educated children of the elementary school grades, and because these children probably better understand the purpose and meaning of the drug questionnaire.

To balance the sample populations of the two communities, two classrooms of sixth and fifth grades at Keene were to be tested in the survey. However, when the questionnaires were administered, it was possible to meet with only one fifth grade class. The resulting sample population is distributed in the following manner:

One fifth grade class of Stonewall Jackson, Denton--24 respondents.
One sixth grade class of Stonewall Jackson, Denton--27 respondents.
One fifth grade class of Jefferson Davis, Denton--29 respondents.
One sixth grade class of Jefferson Davis, Denton--26 respondents.
One fifth grade class of Keene Adventist Elementary, Keene--23 respondents.
Two sixth grade classes of Keene Adventist Elementary, Keene--34 respondents.

There are 106 Denton subjects and 57 Keene subjects. There are 76 fifth grade subjects and 87 sixth grade subjects.

Data Collection

Early in May, 1971, the questionnaire was pre-tested on six fifth and sixth grade children of a Fort Worth, Texas elementary school. On May 12, the data collection began with fifty-one children of Stonewall Jackson Elementary; on May 13, fifty-five children of Jefferson Davis Elementary responded to the questionnaire; and the fifty-seven

children of Keene Adventist Elementary were surveyed on May 14, 1971. All Denton and fifth grade Keene respondents were surveyed in their respective classrooms; the two Keene sixth grade classes were gathered into one room to answer the questionnaire.

All 163 respondents received an identical fifty-five item questionnaire and were read the instructions and each question of the survey by the investigator while the pupils followed the reading, marking their responses. Time for each of the six administrations was approximately thirty minutes.

The Instrument

The survey questionnaire consists of eight pages (see Appendix I). The first eleven items are face sheet data asking for age, racial group, father's occupation, mother's occupation, father's schooling, mother's schooling, church denomination, frequency of church attendance, length of residence in community, membership in clubs or groups, and evidence of drug education in clubs or groups.

Questions used to measure drug knowledge levels and attitudes toward drugs are interspersed throughout the questionnaire. Those items that measure the knowledge level of the respondent are 12, 13, 19, 20, 22, 23, 24, 25, 26, 27, 33, 42, 43, 45, and 55. Of these questions, 23, 24, 25, 26, 27, and 55 relate to knowledge of drug jargon, for

example, definitions of the word speed or the phrase turn on. The remaining knowledge-related questions produce a score on general drug knowledge, excluding jargon. Both sets of questions combined, however, were used in scoring and ranking the respondent on his level of drug knowledge. None of the fifteen drug knowledge level questions is considered more important than the others; rather, each question is weighted on the drug knowledge scale chiefly according to the number of possible responses. For instance, the most correct answer to question twelve is the combination of answers two and three, for which the respondent receives five points toward his score on the knowledge level scale.* Question twelve and its answers follow:

---

*To answer queries as to how heroin can cause deformities, the following citation from Ernest Harm's Drug Addiction in Youth is noted:

> Reports of cases from the beginning of this century to the present year (1964) all point to the fact that infants born of opiate or opiate-like drugs addicted (at the time of delivery) mothers are themselves addicted.

In addition, Harms continues, this situation may cause the child to have ". . . anomalies resulting from intrauterine development in an addicted mother (5, p. 6).

12. Which one of these drugs can cause babies to be born deformed?

	1. marijuana	(0)	
	2. LSD	(4)	(3)
	3. heroin	(2)	(5)
3.	4. none of these drugs	(0)	
	5. all three of these drugs	(1)	
	6. I do not know	(0)	

Respondents were informed that they might circle more than one answer if they considered that to be the most correct manner in which to answer the specific question. As a result, the range on the drug knowledge scale is from 0 to 21.

The drug attitude scale is similarly constructed and is composed of questions 14, 15, 16, 17, 18, 31, 32, 35, 36, 44, 46, 47, 48, 49, 50, 51, 52, 53, and 54. With questions ranging in value from one point to five points, the range of scores is from 0 to 49, the highest score indicating the most negative attitude toward drugs. Thus, the higher the score on the drug attitude scale, the more the respondent disapproves of the use of illegal drugs. Inversely, a score of zero would imply the most tolerant attitude toward drugs obtainable on this attitude scale.

Taking question seventeen as an example,

The prison term for use of marijuana

1.	is not long enough	(5)
2.	should stay as it is	(4)
3.	should be made shorter	(2)
4.	should be done away with	(1)
5.	I do not know	(3)

the most negative response, "is not long enough," results in

an attitude scale value of 5. The most tolerant attitude, "should be done away with," receives a value of 1. The "I do not Know" response is valued 3, giving it a neuter value so as to avoid skewing the attitude score; otherwise, the absence of an attitude would result in a score indicating a tolerant drug attitude. A complete breakdown by question of both the knowledge and attitude scales may be found in Appendix II.

Data Analysis and Statistical Design

Each of the 163 questionnaires was coded by keypunching onto IBM cards. The BMD02S program was utilized in analyzing all data, and chi square tests were conducted by the computer on the variables compared. The chi square test attempts to determine whether the observed sample differences denote differences among populations or whether they are simply the chance variations that are to be expected among random samples from the same population. This test, as is widely known, is used extensively in testing for goodness of fit and in testing the validity of hypotheses. The test is accomplished by comparing the observed data, expressed as frequencies in various categories or groups, with the theoretical or expected results in the same categories or groups. By following the row for the specified degrees of freedom across the columns of the chi square table until a value of chi square is encountered which

exceeds the value of the computed chi square, the probability range may be determined (9, pp. 42-47; 7, pp. 262-264).

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CHAPTER IV

RESULTS

Description of the Sample

Of the 163 questioned respondents, 65 per cent are residents of Denton, and 35 per cent are residents of Keene. (See Table I for an analysis of the sample by city of residence, age, race, and church denomination.) It should again be noted that although the seven classes of elementary schoolchildren comprising the sample are similar in number of students, only one class of fifth grade students was tested in Keene due to difficulty in test scheduling.

The discrepancies existing between the communities of Denton and Keene are many. For instance, there are no black schoolchildren in the Keene sample, and there are twice as many Mexican-Americans in the Denton sample as there are in the Keene sample. Also, while 62 per cent of the Denton children are either Baptist, Methodist, or Presbyterian, only one tenth of one per cent of the Keene children are. On the other hand, where 99.99 per cent of the Keene elementary schoolchildren are Seventh Day Adventists, there are no Denton schoolchildren who are of this denomination. In addition to a high proportion of

Protestants in Denton, there are also twelve other denominations represented. With the exception of the one Keene youth who is a Protestant, all subjects from that city belong to the same church denomination.

All these cited factors tend to illustrate the heterogeneity of Denton as opposed to the marked homogeneity of Keene. (See Table I.)

Report on Variable Comparisons and Testing of Hypotheses

Knowledge Levels

With a high possible score on the drug knowledge level test of 21, determined according to 15 specific questions from the questionnaire, the scores were classified into four groups: a score of 1, 2, 3, 4, or 5 is deemed Very Low knowledge; 6,7,8,9, or 10, a Low knowledge score; 11, 12, 13, 14, or 15, Intermediate knowledge; and 16, 17, 18, 19, 20, or 21, High knowledge.

Most of the 163 respondents, 64.4 per cent, scored in the Intermediate range. Three and one tenth per cent scored Very Low, 25.8 per cent, Low; and 6.7 per cent, High.

The results on drug knowledge do not support Hypothesis 1, which states that schoolchildren of a heterogeneous city will display higher levels of correct knowledge about drugs than will schoolchildren of a homogeneous city. The data show that the Keene elementary schoolchildren significantly

TABLE I

DESCRIPTION OF SUBJECTS BY CITY OF RESIDENCE, AGE, RACE, AND CHURCH DENOMINATION

Variable	City of Residence		Total
	Denton n = 106	Keene n = 57	N = 163
Age			
10 years	. . .	6.0	6.0 n = 1
11 years	5.5	3.1	8.6 n = 14
12 years	30.1	11.1	41.2 n = 67
13 years	25.1	18.4	43.6 n = 71
14 years	4.3	1.8	6.1 n = 10
			100.0
Race			
White	52.2	33.7	85.9 n = 140
Black	10.4	. . .	10.4 n = 17
Mexican-American	2.4	1.2	3.7 n = 6
			100.0
Church Denomination			
Baptist, Methodist, and Presbyterian	40.5	0.6	41.1 n = 67
Seventh Day Adventist	. . .	34.4	34.4 n = 56
Catholic	2.5	. . .	2.5 n = 4
Church of Christ	5.5	. . .	5.5 n = 9
Episcopal	0.6	. . .	0.6 n = 1
Church of God	3.1	. . .	3.1 n = 5
Pentecostal	0.6	. . .	0.6 n = 1
Assembly of God	0.6	. . .	0.6 n = 1
Church of the Nazarene	1.2	. . .	1.2 n = 2

TABLE I--Continued

Jehovah's Witnesses	0.6	. . .	0.6 n = 1
Interdenominational	0.6	. . .	0.6 n = 1
Lutheran	1.2	. . .	1.2 n = 2
Kingdom Hall	0.6	. . .	0.6 n = 1
Christian Church	0.6	. . .	0.6 n = 1
None	4.9	. . .	4.9 n = 8
No answer	1.8	. . .	1.8 n = 3
			100.0

TABLE II

KNOWLEDGE LEVEL OF SUBJECTS COMPARED BY CITY OF RESIDENCE

City	Knowledge Level by Per Cent				
	Very Low	Low	Intermediate	High	Total
Denton	3.8	30.2	62.3	3.8	100 n = 107
Keene	1.8	17.5	68.4	12.3	100 n = 56
$x^2 = 6.986$, df = 3, $p < .10$					

($x^2 = 6.986$, df = 3, p .10) hold more correct knowledge concerning drugs than do the Denton schoolchildren.

A comparison of the population by school grade shows that the combined fifth grade classes from Denton and Keene

TABLE III

KNOWLEDGE LEVELS COMPARED BY SCHOOL GRADE

Grade	Average Knowledge Level by Per Cent				
	Very Low	Low	Intermediate	High	Total
Fifth	3.9	25.6	68.4	5.7	100 n = 76
Sixth	2.2	25.5	64.4	7.6	100 n = 87

scored slightly higher on the drug knowledge scale than did the sixth grade classes of the two cities.

Grouped together, 74.16 per cent of the fifth grade classes scored in either the Intermediate or the High categories on the knowledge scale. The corresponding percentage for the sixth grades is 72.03.

As can be seen in Table IV, the over-all highest scores are those of the fifth grade class of Keene, of which 91.3 per cent of the students scored in either the Intermediate or High classification. This class is followed by the sixth grade Stonewall Jackson class of Denton, with an Intermediate-High percentage of 85.1.

TABLE IV

KNOWLEDGE LEVELS COMPARED BY SCHOOL CLASS

Class	Knowledge Level by Per Cent				
	Very Low	Low	Intermediate	High	Total Per Cent
Stonewall Jackson Fifth	8.4	29.2	68.4	4.2	100 n = 24
Stonewall Jackson Sixth	0.0	14.8	77.7	7.4	100 n = 27
Jefferson Davis Fifth	3.4	37.9	58.6	0.0	100 n = 29
Jefferson Davis Sixth	3.8	38.4	53.8	3.8	100 n = 26
Keene Adventist Fifth	0.0	8.6	78.3	13.0	100 n = 23
Keene Adventist Sixth	2.9	23.4	61.7	11.7	100 n = 34

The third highest average scores on the drug knowledge scale were obrained by the sixth grade students of Keene, with 73.4 per cent in either the Intermediate or High grouping. This class is followed by the fifth grade Stonewall Jackson class of Denton with 72.6 per cent in the same categories; the fifth grade of Jefferson Davis Elementary, Denton, with 58.6 per cent; and the sixth grade of Jefferson Davis with 57.6 per cent in the Intermediate or High group. Since none of the tested schools had instigated a formal drug education program at the time the survey was conducted, the differences in the scores probably can be largely attributed to different amounts of class time spent by the various teachers in the discussion of drug abuse.

Source of Drug Knowledge

Question number ten of the survey asked respondents the names of the clubs or youth groups of which they were members. Slightly over 51 per cent reported that they were not presently members of any such organization. Of those who were participants in such groups, approximately 42 per cent were Scouts (either Boy Scouts, Girl Scouts, Cub Scouts, Brownies, Weblos, or Campfire Girls), slightly more than 2 per cent were members of the YMCA, 1 per cent were members of the Boy's Club, 11 per cent were Little Leaguers, 3.7 per cent were members of the 4-H Club (all of these from the Denton sample), 34 per cent were members of the Pathfinders (a Seventh Day Adventist youth organization, all

of these subjects being of the Keene sample), and 5 per cent were participants in various school athletic groups.

Only 7 per cent of the club or group members reported having been taught about drugs at their club meetings (question number eleven). Of the ten children who did receive some form of drug education, three did so at Scout meetings, two at Little League, two at school athletic organization meetings, and one each at the YMCA, Boy's Club, and Pathfinders. As no specific group reached all the indicated members with drug education, these affirmative answers probably signify knowledge gained informally from the group's leader.

The students were asked in question number twenty-one the source of most of their knowledge about drugs and were offered any of the following responses, or a combination of any number of them:

1. at my school
2. from my parents
3. at my church
4. from my friends or people my age
5. on television or in magazines
6. from other places not listed here

In answer to this question, two children, 1.2 per cent of the subjects, gave no response. Significantly, the first of these students obtained a score of 1 on the knowledge level scale, indicating that he had probably received no drug education in any form. The second student scored 14, and no valid inference can be drawn. The largest

number of students, 44.2 per cent, declared their school as the primary source of their knowledge about drugs. Of the Denton respondents, 45.3 per cent gave this answer, while 42.1 per cent of the Keene subjects did so.

The second most frequently cited source of drug knowledge was television or magazines, with 19.6 per cent of the subjects giving this answer. This was followed by a figure of 19.2 per cent indicating their parents as their primary source of drug education; 7.4 per cent who cited school and television and magazines; 6.7 per cent, school and parents; 6.1 per cent who marked the response "from other places not listed here"; 3.7 per cent, "friends or people my age"; 1.2 per cent, parents and television and magazines; and 0.6 per cent who marked "from my church." This latter group consisted of one student, a Denton fifth grade Protestant. There do not appear to be differences between Denton and Keene, nor between the two grades, as to the source of drug education.

Source of Knowledge Compared to Knowledge Level

In order to discover what effect the source of knowledge concerning drugs has on the amount of drug knowledge possessed, the data for these two variables were compared. An analysis of these data is found in Table V.

As previously explained, two students gave no answer to question twenty-one. "I learned most of the things I

TABLE V

SOURCE OF KNOWLEDGE COMPARED TO KNOWLEDGE LEVEL

Source of Knowledge	Knowledge Level by Per Cent					
	Very Low	Low	Intermediate	High	Total	N
None Listed	50.0	. . .	50.0	. . .	100	2
School only	1.4	30.6	59.7	8.4	100	72
Parents only	6.7	13.4	73.3	6.7	100	15
Church	. . .	100.0	. . .	. . .	100	1
Friends	. . .	50.0	33.3	16.7	100	6
TV or Magazines	6.2	21.9	62.5	3.1	100	32
Other Places	. . .	20.0	70.0	10.0	100	10
Parents and TV and Magazines	. . .	. . .	100.0	. . .	100	2
School and TV and Magazines	. . .	25.0	66.7	8.3	100	12
School and Parents	. . .	. . .	100.0	. . .	100	11

know about drugs . . . ," with the result that, of these respondents, 50 per cent scored Low, 50 per cent Intermediate. It may be that neither of these students had, at the time of testing, received any form of drug education, which would explain their lack of correct drug knowledge; or it may be that the two failed to mark an answer because of

indicision or because of a lack of time. There were several cases of such a failure to answer in five other questions in the survey.

The most effective sources of drug knowledge, according to this examination, are a combination of school and parents (100 per cent of students giving this reply scored in the Intermediate-High knowledge classification), and the combination of parents and television and magazines (also 100 per cent of students in the Intermediate-High knowledge classification). It should be noted, however, that while there were eleven students in the former category, there were only two in the latter. The parents alone as a source of drug knowledge shares with the classification "other places" the third most effective means of teaching drug education. (It is not known what these other places are.) The classification school only ranks fourth as the most effective source of drug education. Ranking fifth is "television or magazines." However, according to rankings in the Intermediate knowledge classification, parents only provide a better source of drug knowledge than do television or magazines. It should also be noted that the largest number of students in the High knowledge classification are those who declared the majority of their drug knowledge came from their friends.

It would seem, then, that the most effective method of providing drug education for fifth and sixth grade children

probably is that combining the efforts of the childrens' parents and their schools. It should be remembered, though, that this is seen as the best method of effecting correct drug knowledge; as there can probably be no valid measurement of the source of childrens' attitudes toward drugs, it is not known whether or not the proposed method is the most satisfactory for instilling intolerant attitudes toward drug abuse.

Attitude Toward Drugs

By means of the children's responses to nineteen specific questions intermixed within the fifty-five items of the questionnaire, a score was obtained for each student on a scale designed to determine attitudes toward drug abuse. The scale has a range from 5 to 49 and is designed so that the higher the score, the more negative the attitude toward drug abuse. Scores were classified into five groups, a score of 1 through 9 being termed Highly Tolerant; 10 through 19, Tolerant; 20 through 29, Intermediate; 30 through 39, Intolerant; and 40 through 49, a Highly Intolerant attitude. Although the respondent scored at least 5 if he answered all questions, the 1 through 4 group was retained in order to counterbalance possible neglect in answering attitude scale questions.

The majority (70.6 per cent) of the students scored within the Intolerant attitude classification. No students

scored within the Highly Tolerant group, 0.6 per cent of the students scored Tolerant (only one student), 12.3 per cent scored Intermediate, and 16.6 per cent scored Highly Intolerant.

Considering their primary sources of knowledge about drugs, it is not surprising that most of the Denton and Keene schoolchildren possess intolerant attitudes toward the abuse of drugs. It is apparent that, despite the lack of school drug education programs, the children surveyed by this examination possess attitudes toward drugs that are probably closely akin to the attitudes that school authorities desire them to have.

By city, however, the students of Denton displayed slightly more tolerant attitudes toward the abuse of drugs than did the students of Keene.

TABLE VI

ATTITUDE TOWARD DRUG ABUSE BY CITY

City	Attitude Level by Per Cent					
	Highly Tolerant	Tolerant	Intermediate	Intolerant	Highly Intolerant	Total
Denton	. . .	. . .	13.2	69.8	17.0	100 n = 106
Keene	. . .	1.8	10.5	71.9	15.8	100 n = 57

$x^2 = 2.132$, df = 4, $p < .70$

By combining the percentages of the Intolerant attitude and Highly Intolerant attitude groups, the total then obtained for Denton is 86.8 per cent of Denton students in one of these two classifications; for Keene, this percentage is 87.7. The chi square is not significant ($x^2 = 2.132$, $df = 4$, $p < .70$). Therefore, the data do not support Hypothesis 2, that schoolchildren of a heterogeneous city will display more tolerant attitudes toward drugs than will schoolchildren of a homogeneous city.

Utilizing data for both cities, analysis shows that the sixth grades scored considerably higher than did the combined fifth grades of both cities on the drug attitude scale. Indicating (when concerned with both cities) that the sixth grade students hold more negative attitudes toward drug abuse than the fifth grade students, the sixth grade percentage of students in the Intolerant or Highly Intolerant groups of the attitude scale is 92.13, as opposed to the fifth grades' 83.1.

When classified by individual school according to the percentage of respondents in either the Intolerant or Highly Intolerant classifications, Stonewall Jackson Elementary displayed the most negative over-all attitudes toward drug abuse of all three schools tested (91.8 per cent). Stonewall Jackson is followed by Keene Adventist Elementary (87.5 per cent) and Jefferson Davis Elementary (83.7 per cent).

A significant part of the reason for the high percentage of students holding negative drug attitudes in Stonewall Jackson is the fifth grade class, which has 100 per cent of its members within the Intolerant or Highly Intolerant classifications (to the nearest tenth per cent, 55.5 per cent Intolerant, 44.4 per cent Highly Intolerant). This is probably the result of intolerant attitudes having been deeply instilled in these children by their teacher. However, this class ranked fourth among the tested classes in the amount of correct drug knowledge held. It is apparent, then, that it is not necessary for children to possess significant amounts of correct drug knowledge in order to possess intolerant attitudes toward drug abuse. It would probably be desirable, though, for children to possess intolerant attitudes toward drugs because of significant amounts of correct drug knowledge, for it is possible that children with intollerant drug attitudes and low amounts of correct drug knowledge might later become more tolerant in their attitudes on gaining more knowledge about drugs. Supporting such an argument is the idea sometimes publicized in mass media publications that the stringent laws against the use of marijuana can lead on the part of some persons who experiment with the drug to a general distrust of other drug laws, because these persons believe the information put forth on marijuana to be misleading. Their logic follows that if that information is incorrect, negatively based

information about other drugs may also be misleading. These persons are sometimes inclined to experiment with other drugs as a result.

The Stonewall Jackson fifth grade is followed in intolerance toward drugs by the sixth grade class of Keene, with 88.3 per cent of its members in the Intolerant-Highly Intolerant attitude groupings, which is followed closely by the sixth grade Jefferson Davis class with 88.2 per cent.

Fourth highest in most negative attitude is the fifth grade class of Keene Adventist Elementary with 86.7 per cent; then the fifth grade Stonewall Jackson class, 83.5 per cent; and last, the sixth grade Jefferson Davis class (79.1 per cent).

Knowledge Level Compared to Attitude

As indicated in Chapters II and III of this study, the attitudes of schoolchildren toward drugs seem to be significantly related to the amount of correct knowledge about drugs that children possess; and as indicated, the relationship that these two factors hold is still unclear. As previously explained, reports vary in opinion and support of the idea as to whether the amount of correct knowledge about drugs is found more frequently among children with positive or with negative attitudes toward drugs. This problem is worthy of further examination considering the contemporary emphasis placed on drug education for schoolchildren.

TABLE VII

ATTITUDE TOWARD DRUG ABUSE BY CLASS

Class	Attitude Levels by Per Cent					
	Highly Tolerant	Tolerant	Intermediate	Intolerant	Highly Intolerant	Total
Stonewall Jackson Fifth	. . .	. . .	16.7	75.1	8.4	100 n = 24
Stonewall Jackson Sixth	. . .	. . .	. . .	55.5	44.4	100 n = 27
Jefferson Davis Fifth	. . .	. . .	20.6	79.1	. . .	100 n = 29
Jefferson Davis Sixth	. . .	. . .	15.3	72.9	15.3	100 n = 26
Keene Adventist Fifth	. . .	. . .	13.0	78.1	8.6	100 n = 23
Keene Adventist Sixth	. . .	2.9	8.7	67.7	20.6	100 n = 34

In an attempt to elucidate the relationship between these two variables for the population examined in this survey, the data indicating amount of correct drug knowledge was compared to that indicating attitudes toward drugs (Table VIII). Employing the previously defined categories of knowledge levels and attitudes, analysis shows that among this sample of fifth and sixth grade students,

the highest number of respondents in any category is found in the High knowledge, Intolerant attitude group (43.6 per cent). The second largest percentage of students, 20.2, falls in the category of Intermediate knowledge, Intollerant attitude. This is followed by 12.9 per cent in the High knowledge, Highly Intolerant attitude group.

TABLE VIII

KNOWLEDGE LEVEL COMPARED TO ATTITUDE TOWARD DRUG ABUSE, PER CENT OF TOTAL SAMPLE

Knowledge Level	Attitude Levels by Per Cent					
	Highly Tolerant	Toler-	Inter-mediate	Intol-erant	Highly Intol-erant	Total Per Cent In Knowledge Level Categories
Low	. . .	. . .	1.8	1.2	. . .	3.1
Inter-mediate	. . .	0.6	2.5	20.2	2.5	25.8
High	. . .	. . .	8.0	43.6	12.9	64.4
Very High	. . .	. . .	. . .	5.5	1.2	6.7
Total in all Atti-tude Cate-gories	. . .	0.6	12.3	70.6	16.6	100 N = 163

The analysis shows that to a point there appears to be a positive relationship between amount of drug knowledge and

intolerance toward drug abuse. Only 40 per cent of the students scoring Low knowledge fall into the Intolerant-Highly Intolerant attitude classification. In this classification for Intermediate drug knowledge there are 88.1 per cent of the students, but in the High knowledge group, there are only 87.6 per cent of the students in the Intolerant-Highly Intolerant classification. The most intolerant group is that made up of students who scored Very High on the knowledge level scale. One hundred per cent of these children scored Intolerant or Highly Intolerant.

TABLE IX

KNOWLEDGE LEVEL COMPARED TO ATTITUDE TOWARD DRUG ABUSE, PER CENT BY KNOWLEDGE LEVEL

Knowledge Level	Attitude Levels by Per Cent					
	Highly Tolerant	Tolerant n = 1	Intermediate n = 20	Intolerant n = 115	Highly Intolerant n = 27	Total n = 163
Low	. . .	. . .	60.0	40.0	. . .	100 n = 5
Intermediate	. . .	2.4	9.5	78.6	9.5	100 n = 42
High	. . .	. . .	12.4	67.6	20.0	100 n = 105
Very High	. . .	. . .	. . .	81.8	18.2	100 n = 11

$x^2 = 17.99$, df = 9, $p < .05$

Significant to the 5 per cent level ($x^2 = 17.99$, df = 9), these data fail to support Hypothesis 4, which states that respondents showing high levels of correct drug knowledge will display more tolerant attitudes toward drugs than will respondents with low levels of correct drug knowledge. The possible implications of this finding are discussed at length in Chapter V.

Race

On comparing drug knowledge levels with the race variable, one finds that the tested white schoolchildren possess more extensive correct information about drugs than do either black or Mexican-American schoolchildren.

TABLE X

RACE COMPARED TO KNOWLEDGE LEVEL

Race	Knowledge Levels by Per Cent				
	Low	Intermediate	High	Very High	Total Per Cent
White	1.4	21.5	70.0	7.2	100 n = 140
Black	5.9	58.9	35.3	. . .	100 n = 17
Mexican-American	33.4	33.4	16.7	16.7	100 n = 6
$x^2 = 89.329$, df = 28, $p < .10$					

The percentage of white respondents in either the High or Very High knowledge level classifications is 77.2. The corresponding percentage for blacks is 35.3, and for Mexican-Americans, 33.4. However, one must consider these data in light of other factors, such as the possible influence of relative cultural deprivation, for example, the lack of membership in clubs or groups or the possible absence of television or magazines in the home.

The race-knowledge level relationship was found to be significant at the .001 level ($x^2 = 89.329$, df = 28). Thus it can be concluded that white schoolchildren will display higher levels of drug knowledge than will schoolchildren of the two other racial classifications.

The examination of the race variable and attitude level lends support to Hypothesis 3, which states that racial minority group respondents will display more tolerant attitudes toward drugs than will white respondents.

TABLE XI

RACE COMPARED TO ATTITUDE TOWARD DRUG ABUSE

Race	Attitude Levels by Per Cent					
	Highly Tolerant	Tolerant	Intermediate	Intolerant	Highly Intolerant	Total
White	. . .	0.7	9.3	70.7	19.3	100 n = 140
Black	. . .	. . .	35.3	64.7	. . .	100 n = 17
Mexican-American	. . .	. . .	16.7	83.3	. . .	100 n = 6
$x^2 = 13.277$, df = 6, $p < .05$						

Grouping the data into an Intolerant-Highly Intolerant attitude classification shows that both black and Mexican-American schoolchildren show more tolerant attitudes toward drugs than do white schoolchildren. The Intolerant-Highly Intolerant percentage for whites is 90; for Mexican-Americans, 83.3 per cent; for blacks, 64.7 per cent. These results are significant at the .05 level ($x^2 = 13.277$, df = 6, and thus support the hypothesis that racial minority group respondents will display more tolerant attitudes toward drugs than will white respondents.

Acquaintance With Drug Users

As discussed in the review of literature leading to the formulation of Hypothesis 5, it was hoped that the results of this study would provide additional information as to whether or not a child's acquaintance with one or more actual drug users has an effect on his attitude toward drug abuse. The hypothesis proposed states that respondents acquainted with one or more drug users will display more tolerant attitudes toward drugs than will respondents who know no drug users.

Question 28 of the survey is utilized to examine this hypothesis by a comparison to scores on the attitude scale. Question 28 and its answers follow:

How many people of any age do you know who have used drugs that are against the law?

1. none
2. one or two
3. three or four
4. five to ten
5. more than ten or eleven.

Two students, comprising 1.2 per cent of the entire sample, gave no answer to this question. Seventy-one students, 44.1 per cent of those tested, replied that they knew no persons who had used illegal drugs; 55.9 per cent acknowledged that they were acquainted with one or more illegal drug users. Thirty-five per cent admitted knowing one or two; 11 per cent, three or four; 3.7 per cent, five to ten; and 5.5 per cent, eleven or more.

TABLE XII

NUMBER OF DRUG USERS KNOWN COMPARED TO ATTITUDE TOWARD DRUG ABUSE

Number Drug Users Known	Attitude Levels by Per Cent					
	Highly Tolerant	Tolerant	Intermediate	Intolerant	Highly Intolerant	Total N = 161
None	. . .	. . .	11.3	70.4	18.3	100 n = 71
1 or 2	. . .	. . .	12.3	71.9	15.9	100 n = 57
3 or 4	. . .	. . .	5.6	77.9	16.8	100 n = 18
5 to 10	. . .	16.7	. . .	66.8	16.7	100 n = 6
11 or more	. . .	. . .	44.4	44.4	11.1	100 n = 9

Of those children declaring no acquaintance with any users of illegal drugs, the majority, 70.4 per cent, scored Intolerant on the drug attitude scale. Eleven and three tenths per cent had Intermediate scores, and 18.3 per cent had highly Intolerant scores.

TABLE XIII

ACQUAINTANCE WITH DRUG USERS COMPARED TO ATTITUDE TOWARD DRUG ABUSE

Number Drug Users Known	Attitude Levels by Per Cent					
	Highly Tolerant	Tolerant	Intermediate	Intolerant	Highly Intolerant	Total
None	. . .	. . .	11.3	70.4	18.3	100 n = 71
One or more	. . .	1.1	13.3	70.0	15.6	100 n = 90
$x^2 = 1.105$, df = 3, $p < .80$						

Those children who stated that they did know one or more drug users scored similarly, with 1.1 per cent Tolerant, 13.3 per cent Intermediate, 70 per cent Intolerant, and 15.6 per cent Highly Intolerant. The results indicate that for the tested Denton and Keene population, whether or not a child knows one or more actual users of illegal drugs makes no significant difference in his attitude toward drug abuse. The data, therefore, do not support Hypothesis 5 ($x^2 = 1.105$,

df = 3, $p < .80$). The probable reasons for these results are found in Chapter V.

Effect of Church Affiliation on Drug Knowledge Level and Attitude Toward Drugs

In order to determine whether or not a child's church affiliation has an effect on his level of correct knowledge about drugs or on his attitude toward drug abuse, the data for these variables were compared.

As shown by Table XIV, the respondents' religious affiliations (or lack of religious affiliations) have a definite effect on their drug knowledge levels. For example, except in the case of a few children from the very large populations for the Baptist, Methodist, or Presbyterian and Seventh Day Adventist classifications, the only children to score in the Very Low knowledge grouping were those who listed no church denomination in answering their questionnaire.

Except for equal percentages of children who are either Baptist, Methodist, or Presbyterian, or who are Seventh Day Adventist (the most frequently represented religious affiliations), the only denominations to have children represented in the High knowledge level grouping are the Lutheran Church (50 per cent) and the Christian Church (100 per cent).

There are four church denominations (Episcopal, Pentecostal, Church of the Nazarene, and Jehovah's Witnesses) of which 100 per cent of their children fall into the Low

TABLE XIV

EFFECT OF CHURCH AFFILIATION ON KNOWLEDGE LEVEL

Church Affiliation	Knowledge Levels by Per Cent				
	Very Low	Low	Inter-mediate	High	Total
None Listed	33.3	. . .	66.6	. . .	100 n = 3
Marked "None"	12.5	12.5	75.0	. . .	100 n = 8
Baptist, Methodist and Presbyterian	3.0	23.9	70.2	12.5	100 n = 67
Seventh Day Adventist	1.8	17.9	67.8	12.5	100 n = 56
Catholic	. . .	50.0	50.0	. . .	100 n = 4
Episcopal	. . .	100.0	. . .	. . .	100 n = 1
Church of God	. . .	40.0	60.0	. . .	100 n = 5
Church of Christ	. . .	66.6	33.3	. . .	100 n = 9
Pentecostal	. . .	100.0	. . .	. . .	100 n = 1
Assembly of God	. . .	. . .	100.0	. . .	100 n = 1
Church of Nazarene	. . .	100.0	. . .	. . .	100 n = 2
Jehovah's Witnesses	. . .	100.0	. . .	. . .	100 n = 1
Interdenomina-tional	. . .	. . .	100.0	. . .	100 n = 1
Lutheran	. . .	. . .	50.0	50.0	100 n = 2
Kingdom Hall	. . .	. . .	100.0	. . .	100 n = 1
Christian Church	. . .	. . .	. . .	100.0	100 n = 1

$x^2 = 269.8069$, df = 210, $p < .005$

level of correct drug knowledge. In the case of the Assembly of God, the Interdenominational, and the Kingdom Hall children, 100 per cent fall into the Intermediate knowledge category. Only five church denominations (Assembly of God, Interdenominational, Lutheran, Kingdom Hall, and Christian Church) are represented by children all of whom score in the Intermediate-High grouped classification of drug knowledge levels.

Significant to the .005 level ($x^2 = 269.8069$, $df = 210$), the data show that Hypothesis 6 is not supported. Although only 32.5 per cent of the 163 schoolchildren reported having been spoken to by their church minister on the subject of drugs, these data show that there is a definite positive correlation between affiliation with a church and the amount of correct knowledge about drugs a child possesses, and that this correlation is more highly marked for some particular denominations.

The existence or lack of existence of affiliation with any church denomination or a particular church denomination, however, has no effect on a child's attitude toward drugs. As can be seen in Table XV, there are no marked differences in attitude scores for the various religious affiliations.

The only respondent to score Tolerant on the attitude scale is a member of the Seventh Day Adventist Church. The only church denominations whose represented children all scored High in attitude were the Jehovah's Witnesses and the

TABLE XV

EFFECT OF CHURCH AFFILIATION ON ATTITUDE TOWARD DRUG ABUSE

Church Affiliation	Attitude Score by Per Cent					
	Highly Tolerant	Tolerant	Intermediate	Intolerant	Highly Intolerant	Total
None Listed	. . .	. . .	33.3	66.6	. . .	100 n = 3
Marked "None"	. . .	. . .	25.0	62.5	12.5	100 n = 8
Baptist, Methodist, and Presbyterian	. . .	. . .	12.0	71.7	16.3	100 n = 67
Seventh Day Adventist	. . .	1.8	9.0	73.2	16.1	100 n = 56
Catholic	. . .	. . .	. . .	100.0	. . .	100 n = 4
Episcopal	. . .	. . .	. . .	100.0	. . .	100 n = 1
Church of God	. . .	. . .	. . .	60.0	40.0	100 n = 5
Church of Christ	. . .	. . .	33.3	55.5	11.1	100 n = 9
Pentecostal	. . .	. . .	. . .	100.0	. . .	100 n = 1
Assembly of God	. . .	. . .	. . .	100.0	. . .	100 n = 1
Church of Nazarene	. . .	. . .	. . .	50.0	50.0	100 n = 2
Jehovah's Witnesses	. . .	. . .	. . .	. . .	100.0	100 n = 1
Interdenominational	. . .	. . .	. . .	100.0	. . .	100 n = 1
Lutheran	. . .	. . .	50.0	50.0	. . .	100 n = 2

TABLE XV--Continued

Church Affiliation	Attitude Score by Per Cent					
	Highly Toler-and	Toler-ant	Inter-mediate	Intol-erant	Highly Intol-erant	Total
Lutheran	. . .	. . .	50.0	50.0	. . .	100 n = 2
Kingdom Hall	. . .	. . .	. . .	100.0	. . .	100 n = 1
Christian Church	. . .	. . .	. . .	. . .	100.0	100 n = 1
$x^2 = 258.3323$, df = 285, $p < .50$						

Christian Church, both of which also have their represented children in the Intermediate-High grouping on the drug knowledge level scale.

One hundred per cent of the children of the following denominations fall into the Intolerant-Highly Intolerant attitude classification: Catholic, Episcopal, Church of God, Pentecostal, Assembly of God, Church of the Nazarene, Jehovah's Witnesses, Interdenominational, Kingdom Hall, and the Christian Church.

These data lend some support to Hypothesis 7, that church affiliation will have no effect on schoolchildren's attitudes toward drug abuse. ($x^2 = 258.3323$, $df = 285$, $p < .50$).

CHAPTER V

CONCLUSIONS AND DISCUSSION

Before discussion of the conclusions drawn from this research, the purpose and method of the study are summarized for the reader. The survey proposed to examine the knowledge levels and attitudes toward drug abuse among a population of 163 fifth and sixth grade students of Denton and Keene, Texas, from three different schools. In the sample were 106 schoolchildren from Denton and 57 from Keene. Following a review of the existing literature concerned with the cited topics, the following seven hypotheses were proposed:

1. Schoolchildren of a heterogeneous city will display higher levels of correct knowledge about drugs than will schoolchildren of a homogeneous city.

2. Schoolchildren of a heterogeneous city will display more tolerant attitudes toward drugs than will respondents of a homogeneous city.

3. Racial minority group respondents will display more tolerant attitudes toward drugs than will white respondents.

4. Respondents showing high levels of correct drug knowledge will display more tolerant attitudes toward drugs than will respondents with low levels of correct drug knowledge.

5. Respondents acquainted with one or more drug users will display more tolerant attitudes toward drugs than will respondents who know no drug users.

6. Church affiliation will have no effect on schoolchildrens' drug knowledge levels.

7. Church affiliation will have no effect on schoolchildrens' attitudes toward drug abuse.

The 163 schoolchildren answered a 55 item questionnaire that included 15 questions designed to test the amount of correct information about drugs and drug abuse that each child possesses and 19 questions that measured the attitudes of the children toward drug abuse on a quantitative scale ranging in value from 1 to 49 points. Low scores indicate a tolerant attitude toward drug abuse, high scores, a negative attitude. Scores on the attitude scale were classified into Highly Tolerant, Tolerant, Intermediate, Intolerant, and Highly Intolerant categories. The knowledge scale scores were classified into Very Low, Low, Intermediate, and High categories. The resulting scores, one for each child in attitude and in knowledge level, were analyzed in testing the seven hypotheses.

Sixty-four and four tenths per cent of the children scored in the Intermediate range on the knowledge level scale. Approximately 25 per cent scored Low, and small percentages scored Very Low and High. While 80.7 per cent of the Keene subjects scored in either the Intermediate or High classification, only 66.1 per cent of the Denton subjects did so. Hypothesis 1, that schoolchildren of a heterogeneous city will display higher levels of correct knowledge

about drugs than will schoolchildren of a homogeneous city, is not supported by the data.

Because none of the three schools tested--two in Denton and one in Keene--had initiated drug education programs at the time the survey was conducted, it is probable that the differences between respondents' scores in the two cities are a result of classtime instruction on the part of individual teachers. As stated previously, more of the tested students (44.2 per cent) indicated that their primary source of knowledge about drugs came from their school than from any other source. It would seem then, that the teachers of the Keene classes have given more class time to the discussion of drugs and drug abuse than have the Denton teachers. This may imply that the Keene teachers are more concerned with the problem of drug abuse, although it would seem that the Denton teachers have more reason to fear that their students will come into contact with drugs and drug users.

Because the Texas state legislature required that, beginning September, 1971, all schoolchildren in the grades five through twelve inclusive receive prepared drug education, it would be profitable to test a similar number of children from each city after this program has been in effect for several years in order to discern whether or not differences in knowledge levels still exist. Assuming that

both cities will instigate the same or similar programs of classroom drug education, it could then be determined as to whether or not other variables, such as the more pronounced availability of drugs in Denton and the larger number of drug users in Denton as opposed to Keene, will have an effect on the knowledge levels of the elementary schoolchildren of the two cities.

After several years of state supported drug education, it could also be determined as to whether or not the attitudes of the children in each city differed more than they presently do. The data from this research reveal that the tested children when compared by city did not display significant differences in attitudes toward drug abuse.

Because this survey showed that those children with higher levels of drug knowledge generally hold more intolerant attitudes toward drugs than do children with lower knowledge levels, it should have also significantly shown Keene students to possess more intolerant attitudes than the Denton students. This phenomenon held true, but was not statistically significant. It may well be that had the sample populations of the two cities been more equally balanced, the data would have been significant. As it is, little explanation can be offered.

Hypothesis four asserted that respondents showing high levels of correct drug knowledge would significantly

display more tolerant attitudes toward drugs than would respondents with low levels of correct drug knowledge. Data of this research shows, however, that the exact opposite is true for the tested population. For example, of those students scoring Low on the drug knowledge level scale, only 40 per cent scored in the combined Intolerant-Highly Intolerant grouping, while of the students scoring Very High in knowledge level, 100 per cent scored within this grouping. It was reported in Chapter III that both Harms and Wiener had discovered that the more specific and accurate the drug knowledge schoolchildren have, the more likely they are to take drugs. It was assumed that because drug use presupposes a rather tolerant attitude toward drugs, that the more extensive the knowledge of the tested schoolchildren, the more tolerant would be their attitudes. The formulation of this idea, however, must be reconsidered when one realizes that both Harms and Wiener, when finding tolerant attitudes and high levels of knowledge, were dealing with actual drug users. It is probable that much information about drugs is picked up as one actually engages in the use of drugs. Assuming that few, if any, of the schoolchildren tested by this survey had actually experimented with drugs, it is improbable that they picked up any information in this way. Rather, the information they have received has been mostly obtained, as indicated by this survey, from their

school, from television or magazines, or from their parents, in that order. It is hardly likely, then, that these children would develop tolerant attitudes with their primary source of knowledge about drugs being any one of those cited. It is likely that the information a bout drugs that would lead one to develop positive attitudes toward drug abuse is information that the individual obtained after beginning actual drug use.

Chein's discovery could be cited to support indirectly such a statement. In New York, he discovered that only 17 per cent of his tested heroin users had received any cautionary information about heroin before their first use of the drug. Chein found that subjects from the neighborhood in which drug use was most sidely prevalent were those who held the most tolerant attitudes toward drugs among all the subjects tested.

A relatively unexpected discovery came on finding support for Hypothesis number three, racial minority group respondents will display more tolerant attitudes toward drugs than will white respondents. With the data statistically significant to the five per cent level, the stated hypothesis was supported. The Intolerant-Highly Intolerant attitude grouping percentage for whites was 90; for Mexican-Americans, 83.3 per cent; and for blacks, 64.7 per cent.

With drug abuse becoming more and more a white middle-class phenomenon, it is unlikely that the development cited is a result of more extensive contact, on the part of minority group members, with situations that produce tolerant attitudes toward drug abuse. Rather, it is likely that the more tolerant attitudes toward drugs among minority group schoolchildren as compared to white schoolchildren, are the result of the lesser amount of correct knowledge about drugs possessed by the minority group members. Note that it was discovered that the more correct drug information the surveyed fifth and sixth graders have, the more apt is their attitude toward drug abuse to be intolerant. And significant to the .001 level, the survey showed that white schoolchildren as a whole possessed more than twice the correct information about drugs than did racial minority group members. It is likely then, that fifth and sixth grade racial minority group members possess more tolerant attitudes toward drugs because they possess a substantially smaller amount of correct drug knowledge.

The fifth hypothesis proposed that respondents acquainted with one or more drug users will display more tolerant attitudes toward drugs than will respondents who know no drug users, was not supported by survey data. The data showed that for the tested population it made no difference in a child's attitude whether or not he knew one or more or

no actual drug users. It should be noted, however, that where those children acquainted with three or four drug users together scored 94.7 per cent in the Intolerant-Highly Intolerant classification, those children reporting knowing eleven or more drug users scored only 55.5 per cent in this grouping. It would appear then, that knowing eleven or more drug users has had the effect on childrens' attitudes toward drugs of making them more tolerant. However, there was only a very slight difference in attitude between children knowing five to ten drug users and those knowing no drug users at all.

There have been no data published to show that any more than a minute number of nine, ten, eleven, or twelve year old American schoolchildren are as yet taking illegal drugs. The drug users with whom the tested children acknowledged acquaintance are mostly persons older than themselves. Only eight respondents reported knowing more than one or two children of their own age who had used illegal drugs; 76.1 per cent reported knowing no one of their approximate age who had done so.

These known older persons who have used illegal drugs are apparently not significantly influential in the development of tolerant attitudes toward drugs among the tested schoolchildren. Rather, it would seem that since most knowledge about drugs comes from school, television or

magazines, or from the parents, the attitudes toward drugs also derives from these sources, and as stated, it is unlikely that tolerant attitudes would emanate from these sources.

As illustrated in the data on Hypothesis six and Hypothesis seven, it appears that there is a high positive correlation between affiliation with a church and the amount of correct knowledge about drugs that a child possesses, and that the correlation is higher for some church denominations than for others. However, the particular church with which a child is affiliated or the event that he is not affiliated with any church has no significant effect on the child's attitude toward drug abuse. It is apparent, however, that churches are playing a more significant role in the dissemination of correct information about drugs than the tested children have noted.

In conclusion it should be stated that a mass of additional research of this type should be conducted. Although this survey has made a beginning in examining a previously unexplored aspect of "the drug problem" in having scrutinized the knowledge levels and attitudes of a number of fifth and sixth grade schoolchildren, the number of respondents in the sample, 163, is but an infinitesimal portion of the millions of grade school children in the United States. If the increasing wave of youthful drug use in this country is to be

halted, a larger number of these children should be sociologically examined concerning their knowledge and attitudes about drugs and drug abuse. These millions of Americans should be given information about drugs at an early age, and they should be given correct information, before they are of an age where drug use becomes a significant factor in the environment of their peer group.

It should be considered, though, that to search for the answer to the drug problem by looking into the ideas of possible future drug users is like searching for the source of a river by looking at a glass of water drawn from the kitchen tap. A part of the reason for the increasing use of drugs may be found in the minds of drug users or even potential drug users, but drug abuse is not the real problem in our society; it is but the symptom of a larger problem. And that problem is the composition of the society itself--a society that fails so extensively in its functioning that millions of its potential members and producers deem it necessary to escape that society through the use of chemical substances.

APPENDIX I

TO THE STUDENT:

These questions will be studied to discover an overall view of fifth and sixth grade pupils' knowledge and beliefs about drugs and drug abuse (abuse means to use in the wrong way).

Your name will not be asked or used, so no one will know which answers belong to you. You should answer the questions truthfully though to help the people conducting this study to get a true idea of what people your age know and think about drugs and the abuse of drugs.

There is no right answer to many of these questions, and you will probably not know the answer to some questions. Mark the space I do not know if you feel that you do not know the correct answer.

1. What is your age? _____

2. What is your racial group?

   White _____ Mexican-American _____

   Black _____ Other _____ (tell which one) _____

3. What is your father's job? _____

4. What is your mother's job? _____
   (write "housewife" if she does not work outside your home.)

5. CIRCLE THE NUMBER OF THE RIGHT ANSWER

   How much schooling did your father finish?

   1. 8th grade or less
   2. graduated from high school only
   3. has some college but did not finish
   4. graduated from college
   5. I do not know

6. How much schooling did your mother finish?

   1. 8th grade or less
   2. graduated from high school
   3. has some college but did not finish
   4. graduated from college
   5. I do not know

7. What is your church denomination? _____

8. How often do you go to church?

   1. never
   2. twice a week or more
   3. once a week
   4. about once a month
   5. a few times a year

9. How long have you lived in this town?

   1. less than one year
   2. two years to five years
   3. five years to nine years
   4. all my life

10. What clubs or groups, if any, are you a member of? (Like Cub Scouts, Boy Scouts, Brownies, Weblos, YMCA, for example)

    _____

    _____

    _____

    _____ Check here if you have not joined any groups like this.

11. If you are a member of a group like this, have you ever been taught by your adult leaders about drugs at a meeting of your club or group?

    _____ yes

    _____ no

12. Which one of these drugs can cause babies to be born deformed?

    1. marijuana
    2. LSD
    3. heroin
    4. none of these drugs
    5. all three of these drugs
    6. I do not know

13. Marijuana is a drug that

    1. is given to people by doctors
    2. can be bought at some stores in Texas
    3. is against the law in all parts of Texas
    4. I do not know

14. LSD is a drug that

    1. can be used in a good way but can be used in a bad way, too
    2. helps a person understand himself better
    3. causes mental problems you may never get over
    4. I do not know

15. Heroin

    1. is the worst drug a person can take
    2. is a drug that cannot hurt people
    3. is about as harmful as LSD and marijuana
    4. I do not know

16. People who use marijuana

    1. should be put in prison
    2. should be left alone
    3. should be given drug education instead of jail terms
    4. I do not know

17. The prison term for use of marijuana

    1. is not long enough
    2. should stay as it is
    3. should be made shorter
    4. should be done away with
    5. I do not know

18. The government and the police are against the abuse of drugs

    1. because it leads people to a life of crime
    2. because it makes people unhelpful members of this country
    3. because it means a way of life they do not approve of
    4. I do not know

19. Drug users are usually

    1. white persons
    2. black persons
    3. both black and white persons
    4. I do not know

20. Most people who sell drugs are

    1. older adults
    2. college students
    3. high school students
    4. all of these
    5. I do not know

21. I learned most of the things I know about drugs

    1. at my school
    2. from my parents
    3. at my church
    4. from my friends or people my age
    5. on television or in magazines
    6. from other places not listed here

22. The length of time that a person can be sent to prison

    1. is longer for having LSD than for having marijuana
    2. is longer for having marijuana than for having LSD
    3. are the same for LSD and marijuana
    4. I do not know

23. A "joint" is another name for

    1. someone who sells drugs
    2. a marijuana cigarette
    3. someone who has been arrested for having drugs
    4. I do not know

24. "Turning on" means

1. to get drunk
2. to take drugs
3. to stay away from drugs
4. I do not know

25. "Pot" is another name for

1. LSD
2. marijuana
3. taking drugs through shots with a needle.
4. I do not know

26. To get "busted" means

1. to get arrested for having drugs
2. to get high on drugs
3. to get sick from taking drugs
4. I do not know

27. "Speed" is a drug some people take

1. to stay awake
2. to go to sleep easier
3. to keep them from being nervous
4. I do not know

28. How many people of any age do you know who have used drugs that are against the law?

1. none
2. one or two
3. three or four
4. five to ten
5. more than ten or eleven

29. How many people of your age do you actually know who have used drugs that are against the law?

1. none
2. one or two people
3. three or four people
4. five to ten people
5. more than ten or eleven people

Mark whether you think these sentences are true (Mark yes) or false (Mark no).

30. Have you ever watched a television program about drug abuse?

_____ yes

_____ no

31. To use drugs that are against the law is always a bad thing.

_____ yes

_____ no

32. People who take drugs against the law usually are not members of a church.

_____ yes

_____ no

33. Many songs played on the radio are about drugs.

_____ yes

_____ no

34. Most people who take drugs against the law are hippies.

_____ yes

_____ no

35. Most of the teen-agers who break the law do so because they have taken drugs.

_____ yes

_____ no

36. It would be worse for a person to take drugs than for him to be an alcoholic.

_____ yes

_____ no

37. My parents seem to be interested in talking to me about drugs.

_____ yes

_____ no

38. My parents are against the use of illegal drugs.

_____ yes

_____ no

39. My church minister has talked to me or my group about the use of drugs.

_____ yes

_____ no

_____ I do not have a church minister.

40. My school teacher or principal has talked to my class about the use of drugs.

_____ yes

_____ no

41. All hippies take drugs.

_____ yes

_____ no

42. Drugs are medicines a doctor gives people when they are sick.

_____ yes

_____ no

43. Drugs are what some people take even though it is against the law.

_____ yes

_____ no

44. Drugs are taken by people to escape their problems.

_____ yes

_____ no

45. Drugs are medicines that people sometimes use in the wrong way.

_____ yes

_____ no

46. Marijuana usually leads people to use heroin and other drugs.

_____ yes

_____ no

47. Marijuana is less harmful than alcohol.

_____ yes

_____ no

48. Marijuana can be harmless when used by some people.

_____ yes

_____ no

49. Marijuana may cause damage we do not know about.

_____ yes

_____ no

50. People who use drugs in the wrong way are normal people who have problems.

_____ yes

_____ no

51. Most smart people use drugs and never get caught.

_____ yes

_____ no

52. People who use drugs in the wrong way are people just looking for a good time.

_____ yes

_____ no

53. People who use drugs are people with bad mental problems.

_____ yes

_____ no

54. People who use drugs are normal people who have not been educated about drugs.

_____ yes

_____ no

55. A "pusher" is someone who sells drugs that are against the law.

_____ yes

_____ no

APPENDIX II

VALUES OF ANSWERS TO KNOWLEDGE LEVEL SCALE QUESTIONS AND ATTITUDE SCALE QUESTIONS

Knowledge Level Scale

Question	Answer	Value	Highest Value of Question
12	1.	0	
	2.	4	
	3.	2	5
	4.	0	
	5.	1	
	6.	0	
	7. (1. & 2.)	3	
	8. (2. & 3.)	5	
13	1.	0	
	2.	0	
	3.	1	1
	4.	0	
19	1.	1	
	2.	1	
	3.	2	2
	4.	0	
20	1.	1	
	2.	1	
	3.	1	
	4.	2	2
	5.	0	
	6. (2. & 3.)	2	

Knowledge Level Scale--Continued

Question	Answer	Value	Highest Value of Question
22	1.	0	
	2.	1	1
	3.	0	
	4.	0	
23	1.	0	
	2.	1	1
	3.	0	
	4.	0	
2 24	1.	0	
	2.	1	1
	3.	0	
	4.	0	
25	1.	0	
	2.	1	1
	3.	0	
	4.	0	
26	1.	1	
	2.	0	1
	3.	0	
	4.	0	
27	1.	1	
	2.	0	1
	3.	0	
	4.	0	
33	Yes	1	1
	No	0	
42	Yes	1	
	No	0	1
	Some-times	1	
43	Yes	1	1
	No	0	
45	Yes	1	
	No	0	1
	Some-times	1	

Knowledge Level Scale--Continued

Question	Answer	Value	Highest Value of Question
55	Yes	1	
	No	0	1
	Some-times	1	
			Highest Possible Score 21

APPENDIX III

1 November, 1971

Chief of Police
Keene Police Department
Keene, Texas

Dear Sir:

I am completing this week a sociological survey entitled Drug Knowledge Levels and Drug Abuse Attitudes Among Fifth and Sixth Grade Students of Denton, and Keene, Texas, which is a study of the extent of knowledge possessed by two hundred children in those two towns, along with a measurement of their attitudes, concerning the subject of drug abuse. The study is to be given to the Denton Independent School District and the principal of the Keene Adventist Elementary School in order to show them what methods and amounts of drug education should be given to their schoolchildren. In comparing the children of the two cities it is necessary to know the exact number of drug arrests made in each of the cities during the year of 1970, and the number made (if this information is available) from January to May 1971. I have obtained this information for the city of Denton, but I would appreciate receiving these statistics from you about the city of Keene. All that is needed is the number of arrests made in Keene during the periods cited above for violations concerning narcotics or dangerous drugs.

Please send me this information at your earliest convenience.

Thank you for your assistance,

Jim D. Nations

Jim D. Nations
Box 1937
Southern Methodist University
Dallas, Texas
75222

There have been no arrests made in Keene during the Periods Mentioned above for this type of crime.

J.H. Howard

Keene Chief of Police,
J.H.Howard

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