DRUG KNOWLEDGE LEVELS AND DRUG ABUSE ATTITUDES AMONG
FIFTH AND SIXTH GRADE STUDENTS:
A REPLICATION

THESIS

Presented to the Graduate Council of the
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Mickey, Callie Parker, Drug Knowledge Levels and Drug Abuse Attitudes Among Fifth and Sixth Grade Students: A Replication, Master of Arts (Sociology), May, 1975, 109 pp., 16 tables, bibliography, 33 titles.

This study is concerned with drug knowledge and drug abuse attitudes of a sample of pre-adolescent schoolchildren, 90 from an urban community and 204 from two rural communities. The seven hypotheses tested compared drug knowledge levels and drug abuse attitudes with the variables of community of residence, sources of information, racial identity, acquaintance with drug users, and church affiliation. High levels of drug knowledge were found to be related to rural residence, perceived parental disapproval of drug use, frequency of church attendance, and, to a minor degree, to acquaintance with peer group drug users. The sample held negative views of drug abuse and intolerant drug attitudes correlated significantly with rural residence, parental interest in talking about drugs, church affiliation, and frequency of church attendance. High drug knowledge levels and intolerant drug abuse attitudes were related to only the .20 level of significance.
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CHAPTER I

INTRODUCTION

Even simple societies have social problems. However, as individual roles in such systems are clearly delineated and change little over time, limited deviations from social codes occur. Fundamental problems attendant to basic survival in a physical environment tend to integrate a society. The concomitant built-in sanctions deter individual actions and sources of gratification. In a context of social relationships existing to fulfill need for food and shelter the definition of drug use as a social problem is unlikely (2, p. 9). Rather, in most known primitive societies, both ancient and present day, drug use is surrounded by an aura of religious, social, and medicinal benefit.

Complex social systems, in contrast, are inherently characterized by less cohesiveness and more differences. In them multiple, and sometimes conflicting, goals and incentives are functional. American contemporary society values, ambiguously, both formally controlled order and individual freedom, both social mobility and humanitarianism, both competition and peace. Robert Nisbet (14, p. 6) points out that social problems of greater intensity are to be expected in a highly developed society. A social system where material goods and the quick acquisition of things is valued
will have a consequent high rate of crime against property;
among people who believe in individualism, romantic love,
and contractual ties a high divorce rate is no paradox (14, p. 10). Within a culture of such heterogeneity and extreme
differences a sizable number of persons may disapprove the
drug use habits of other persons (3, p. 147). In this manner a society labels drug use, under specified circumstances
and by certain people, as drug abuse and behavior detrimental
to the whole society.

Drug Use Becomes Drug Abuse

Early in the twentieth century American society designated the non-medical, social use of opiates, other addicting
drugs, and marijuana as drug abuse. Opiate and cannabis
drugs have not always been regarded as dangerous in our
society (7, p. 337). Parenthetically, coffee and tea have
often been viewed as harmful within the two hundred year
history of this nation. As far back as the eighteen thirties
some doctors began to see dangers in opiate use. The invention of the hypodermic needle was considered a solution to
the problem of "opium appetite." Civil War veterans' habitual hypodermic use of morphine swept away that assumption.
A new opiate, heroin, first produced in Germany in 1898, was zealously introduced to the world as non-addicting and an
answer to morphine addiction (8, p. 186). A few years usage
of heroin blasted that overly optimistic hope. Opiates--
opium, morphine, and heroin--were all addicting substances,
however used. Heroin was employed extensively by the underworld population and opium use was widespread in accepted society in the form of tonics, elixirs, patent and prescribed medicines. But opiate use was not yet defined as drug abuse and subject to punitive action.

Official governmental revulsion concerning drug use must be understood against the backdrop of the unique American experience in which it began. The United States, established in the New World and free from corrupting Old World influences, was idealized as man's great chance to prove the essential goodness of natural man living in freedom and guided by reason. Early twentieth century Progressives, looking backward in spirit to the nation's founding ideals, sought to reform and change perceived imperfections in American life. America had to be good to be great. The social scene with its problems was realistically described in literature; journalists and Muckrakers "sought to bring enlightened public opinion to bear upon the evils of industry and government by exposing wrongdoing and corruption wherever they found it" (14, p. 7). Amid such moral climate the first federal narcotics legislation emerged.

President Theodore Roosevelt called an international conference, which met in Shanghai in the first decade of this century, to examine drug abuse and recommend solutions. In 1909 the United States ceased the legal importation of opium. The Shanghai Conference led to the The Hague Convention of
1912 out of which came the first international agreement for control of traffic in opium and other addicting drugs. The United States Congress passed the Harrison Narcotic Act in 1914 in order to adhere to the international agreement. The leading advocate of the bill was Secretary of State William Jennings Bryan who urged passage to fulfill United States treaty obligations (5, p. 48-49). Debate in Congress on the bill was not concerned with moral evils of drug abuse in the nation but with the control of "domestic sale, use and transfer of opium and coca products" (8, p. 187). On the surface the Harrison Act did not appear to be a prohibition act. The bill officially was

... an Act to provide for the registration of, with collectors of internal revenue, and to impose a special tax upon all persons who produce, import, manufacture, compound, deal in, dispense, sell, distribute, or give away opium or coca leaves, their salts, derivatives, or preparations, and for other purposes (5, p. 49).

Patent medicine manufacturers were limited to

... preparations and remedies which do not contain more than two grains of opium, or more than one-fourth of a grain of morphine, or more than one-eighth of a grain of heroin ... in one avoirdupois ounce (5, p. 49).

The right of doctors to prescribe such drugs seemed clearly set forth in these words:

Nothing contained in this section shall apply ... to the dispensing or distribution of any of the aforesaid drugs to a patient by a physician, dentist, or veterinary surgeon registered under this Act in the course of his professional practice only (5, p. 49).

As the bill was a revenue act, enforcement was assigned to the Treasury Department.
In 1919 the government brought action against a number of doctors who had prescribed opiates for addicts. The doctors were convicted and the conviction was upheld by the Supreme Court (8, p. 186). "In the course of his professional practice only" was interpreted to prohibit the prescription of opiates to sustain addiction. Clausen (8, p. 188) states that at that point "the addict-patient vanished; the addict-criminal emerged in his place." But Clausen (8, p. 188) cautions against concluding that conventional society used narcotics to as great an extent as did underworld figures prior to 1914. Public concern about violations of the opiate law surfaced periodically. Congress repeatedly responded by tightening the Harrison Act. "By 1970, Congress had passed fifty-five federal drug laws to supplement the 1914 Harrison Act" (5, p. 56).

Before 1937 marijuana (cannabis sativa) was not federally controlled in the United States, although numerous states had marijuana control laws. The Marijuana Tax Act of 1937 placed the production, use, and transfer of marijuana under federal control and, like the Harrison Act, was to be enforced by the Department of the Treasury.

American society, though its negative sanctions toward opiate and cannabis drugs may be more intense than in some societies, does not stand alone in its position of stricture. "Children in most societies are prohibited the use of hallucinogens and cannabis" (2, p. 177). A reviewer of
physiologist-pharmacologist Gabriel Nahas' 1973 book comments that cannabis is "generally banned today throughout the world, the countries with the greatest historical experience with this weed oppose its use most vigorously" (4, p. 1312). However, the definitive study of Isidor Chein (7, p. 326) accusingly sums up the American formal control of drug abuse as a continuing effort "to suppress the problem, rather than to deal with its causes." Alfred Lindesmith (11, p. 201), in observing varied and inconsistent reactions to drug abuse in our society, remarks that "alcohol abuse is not severely stigmatized and is more or less accepted as one of the hazards of living in a complex world, even though the social evils associated with it eclipse in magnitude those of all other drugs combined." British researcher R. S. P. Wiener (19, p. 165), answering why drugs are considered such a problem, suggests that "the only way the mass of society knows it is being moral is by having an outgroup who are classified as being immoral." Drug abusers qualify admirably as an outgroup.

During the decade of the nineteen sixties, American society witnessed an intensified focus on problems of drug abuse. Hundreds of books, scholarly and not-so-scholarly, mushroomed and propounded the entire continuum from "for drugs" to "against drugs." Newspapers, magazines, popular songs, radio, movies, and television transfixed the public consciousness on the drug scene, particularly the youthful
marijuana scene. Middle class parents, in some instances, saw their adolescent children join, either in spirit or in reality, the flower children and hippies of drug scene centers such as Haight Ashbury. The Woodstock Music Festival epitomized the message of the estranged young. In the nation, tightened drug laws were enforced. Thoughtful people issued somber warnings. It is difficult to say "whether romantic glorifications of such drug scenes or moralistic warnings against their perils contributed more to attracting rebellious young people to them" (5, p. 493). As Wiener observes (19, p. 26), the dramatic opposition to drug use was "a vastly expensive advertising campaign with the slogan 'Drugs are bad for you.' This was an appeal rather than a deterrent to the masochistic element in many people, and to the desire of boys and girls to take exciting risks." Treating drug use as a major problem apparently succeeded in making it one (19, p. 161).

Scientific researchers warned that it was correct to "suspect that the expansion of drug-use would continue geographically, downward by age, diffusing by social class, and extending to more regular use . . . ." (3, p. 348). According to his statistics from metropolitan centers, Richard Blum reported in 1969 that 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 (3, p. 362).

Statement of the Problem

This study is concerned with measuring the drug know-
ledge levels and drug-abuse attitudes of children completing
the fifth and sixth grades of elementary school. Chein (7,
p. 254), the trail-blazing researcher in teen-age addiction,
concluded that research in the earlier lives of children
would possibly show differences between addiction-bound child-
ren and children to whom drugs would hold no attraction.
Wiener (19, p. 24) encourages surveys which can yield infor-
mation on drugs and schoolchildren. Hager (9, p. 296)
asserts that "those desiring to ascertain where drug use
begins must consider research at earlier ages." Richardson
(15, p. 389) recognizes the critical need of knowing what
grade school children feel about drug use.

With the coming of the seventies, the predicted fall-out
from the explosive drug abuse by young adults and adolescents
did sift downward to younger students. But research dealing
with pre-adolescent drug knowledge levels and beliefs related
to drugs was negligible. Chein's early work in the fifties
(7, p. 50) on narcotics addiction among teen-aged boys was
admittedly exploring unknown territory when it dipped into pre-adolescent ages. Wiener (19, p. 38), in 1970, acknowledged that few studies had any direct bearing on drug use patterns of schoolchildren. Both Chein and Wiener studied actual drug users. Apparently no published study in either sociology or psychology had been made of the attitudes or knowledge levels of pre-adolescents still in the process of anticipatory socialization (13, p. 6).

In 1971, because of this particular dearth in research, an initial sociological study of fifth and sixth grade children--at that date the youngest group of children to be so studied--was made by James D. Nations at North Texas State University. A description of his research was presented as his master's thesis in 1972 and was entitled Drug Knowledge Levels and Drug Abuse Attitudes Among Fifth and Sixth Grade Students of Denton and Keene, Texas. Data from his study of 163 fifth and sixth grade students indicated that the schoolchildren of Keene held higher levels of correct knowledge about drugs than did the Denton schoolchildren. At that time neither school system had begun a formal drug education program. The higher the level of drug knowledge of the children, the more intolerant were their attitudes toward drug abuse. Racial minority group respondents of the sample displayed more tolerant attitudes toward drug abuse than did the white respondents. This result was attributed, not to the racial variable, but to the statistically supported
statement that white children possessed higher levels of correct knowledge about drugs. Church affiliation was shown to have a very significant effect on the children's drug knowledge levels but to have little effect on the children's attitudes toward drug abuse (13).

The years since Nations' work was done have brought additional reports of drug abuse among elementary school children (10, p. 3). One reaction by society to the phenomenon of drug abuse has been to press upon schools a share of the responsibility for conveying correct knowledge about drugs and creating negative attitudes toward the inadvisable use of drugs. Many states, including Texas, now require drug education programs in the public schools. The sixty-second Texas Legislature passed the following bill in May 1971:

The Central Education Agency shall develop curricula and teaching materials for units of study on the dangers of crime and narcotics. The unit of study shall be required for all students each academic year for grades 5 through 12 (18, p. 1514).

Implementation of this ruling was begun in Texas schools in September 1971. Nationally, a representative sample of public school teachers responding to the 1973 Teacher Opinion Poll conducted by the National Education Association generally agreed that drug education should be a part of the curriculum. In schools where drug education programs already existed, more than half of the teachers recommended that drug education should be begun even before fourth grade (17, p. 3).
Replication

A brief statement on the value of the replication of research in the accumulation of knowledge is appropriate at this point. In any discipline of the social sciences there is a crying need for replication of research because knowledge is built piece by piece and studies need to be repeated many times in order to establish propositions (1, p. 327). Science is on-going, open-ended, and should be checked and rechecked. "To formulate a research problem in this manner permits the repetition of studies under different unique conditions... It is essential to the development of confidence in research findings" (16, p. 46). And research provides a basis for development of theories and a test of existing ones; it clarifies concepts and may initiate new theory (12, pp. 156-171).

This research project replicates the 1971 study done by Nations. The primary purpose of this study is to measure the drug knowledge levels and drug abuse attitudes of the pre-adolescent children in a sample composed of Denton, Keene, and Alvarado fifth and sixth grade students. Alvarado children have been included in the sample to aid racial balance. Also, on a rural-urban continuum, Alvarado may be considered a "mid-point", both more homogeneous than Denton and more heterogeneous than Keene. Answers to the following questions are sought:

(1) What are the differences in the knowledge levels
between the 1974 students of Denton, Keene, and Alvarado? What are the differences between the 1971 sample and the 1974 sample?

(2) What are the differences in attitudes toward drugs between the 1974 students of Denton, Keene, and Alvarado? What are the differences between the 1971 sample and the 1974 sample?

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

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

(5) What effect does church affiliation have on drug knowledge levels? What effect does church affiliation have on attitudes about drugs?
CHAPTER BIBLIOGRAPHY


CHAPTER II

REVIEW OF THE LITERATURE

Relevant Literature Available for 1971 Study

When literature published within the last fifteen years concerning drugs and drug abuse is limited to books and articles dealing with use by young people, an investigator still must handle well over a hundred volumes (13, p. 10). If drug literature is constricted further to sociological studies using samples of young people, the reading task is simplified. Of sociological studies among young people the ones relevant to Nations' 1971 study were Blum (1, 2), Chein (6, 7), and Wiener (17). These studies dealt almost exclusively with actual drug users and little information came from them about pre-adolescent drug attitudes and knowledge. Valuable use was made of them in the formation of hypotheses.

In The Road to H (7) Isidor Chein and associates report their investigation of the lives of 2,950 adolescent males who were heroin addicts living in three boroughs of New York City during the years 1949-1954 (7, pp. 9-10). The one factor found to be distinctly related to drug use was the experience of living in a relatively discordant family. Heroin users, on the average, suffered loss of a
sense of mutuality which living with a cohesive family brings (7, p. 125). Users came from homes of better socioeconomic conditions than did nonusers; their deprivations were not primarily of material things but of values (7, p. 127). For some reason users had been cast prematurely into adult roles by having experienced radical change in their lives in or near the critically susceptible age of sixteen (7, pp. 161, 152). Additionally,

... in almost all the addict families (97 per cent), there was a disturbed relationship between the parents, as evidenced by separation, divorce, open hostility, or lack of warmth and mutual interest. In these conditions, the mother usually became the most important parent figure in the life of the youngster. But, whatever the vicissitudes of the relationship between the boy and his mother, one theme was almost invariably the same--the absence of a warm relationship with a father figure with whom the boy could identify (7, pp. 273-274).

Chein was forced to the conclusion that "addicts grew up in, and were at least in part shaped by, homes that were far less wholesome than those in which the nonusers were nurtured" (7, p. 298). The nonuser grew up in a home where he was considered a person, responded to, respected and appreciated (7, p. 297). Nonusers, by age sixteen, had had opportunity to try drugs but had refused. Reasons for refusing drugs included a sense of wrong in taking drugs, belief that drugs damage health, and fear of getting into trouble with the law (7, p. 143).

The two volume work of Richard Blum and associates entitled Society and Drugs (1) and Students and Drugs (2)
gives a rather comprehensive history of drugs and a review of several drug-related studies. Included in the research is a 1967 survey in Castro Valley, California, of high school use of drugs (2, p. 13) and a 1967 study of all high school students in San Mateo County, California (2, p. 14). Blum indicates (1, p. 179) that one facet of understanding drug abuse lies in the study of childhood rearing within the natural and social environment. In a chapter discussing drug use by adolescent children of middle class parents, which Blum entitles "Horatio Alger's Children," he suggests that the "type of education which draws heavily on the notion of equals teaching equals, which rewards teamwork in play and work, and which frowns on solitary or individual enterprises from nursery school onward cannot but fail" (2, p. 269). Here failure is defined as inability to transmit the history and value systems of our culture. He urges parents to: both provide and control most of the pleasures of their children throughout childhood and adolescence; reduce peer-group influence and protect their children from the need to adapt to every age-mate group; dedicate themselves to transmitting to their children the cultural wisdom they have learned; have confidence in their own knowledge and right to exercise authority and grant freedom (2, pp. 271-272). The programs involving child-rearing and child-supervising specialists should serve as consultants to parents in their tasks rather than fragmenting family responsibility or serving as surrogate
parents to other people's children (2, pp. 272-273).

*Drugs and Schoolchildren* (17), R. S. P. Wiener's 1970 study of 1,093 London children aged twelve to eighteen, supported the hypothesis that accurate drug knowledge is positively related to drug use (17, p. 131). The characteristic drug users, in comparison with controls, were less likely to go to parents with personal problems, felt at a distance from their mothers, and said that their parents had been overly lenient with them (17, p. 154-155). Drug-takers spent more time in mixed peer company than did the controls and were less nervous about peer group relationships (17, p. 155). "The pattern that emerges from . . . these differences is that drug-takers tend to live a life more typical of an older teenage group" (17, p. 157).

**Literature Accessible Since 1971 Study**

Books published since Nations did his study or that were otherwise unavailable to him were read in the course of this research. The Consumers Union report on narcotics, stimulants, depressants, inhalants, hallucinogens and marijuana -- including caffeine, nicotine and alcohol, *Licit and Illicit Drugs* (5) by Edward Brecher and the editors of *Consumer Reports* was published in 1972. Five years in the making under the auspices of the Consumers Union, the lengthy report explores both social and scientific aspects of drugs in historical and modern contexts. Quoting from Canada's Le Dain
Commission on research among marijuana users, Brecher comments

... that modern drug use would definitely seem to be related in some measure to the collapse of religious values—the ability to find a religious meaning of life. The positive values that young people claim to find in the drug experience bear a striking similarity to traditional religious values, including the concern with the soul, or inner self (5, p. 458).

Chapters in the volume treating inhalants, marijuana, and the drug scene contain summaries of research studies involving youthful samples. Brecher's conclusions on ways to make the drug scene less irresistible (5, pp. 495-496) echo Chein, Blum and Wiener. He recommends that conventional home life be made attractive and challenging to young people and that propaganda and warnings centering attention on drugs be turned off. Above all, Brecher exhorts (5, p. 497) that information for the guidance of the young must be credible and in harmony with everyday life.

The United States Commission on Marijuana and Drug Abuse released a long anticipated report in March of 1972 (12). The tediously repetitive report of one hundred eighty pages was often inconsistent. Commissioners ambiguously recommended removal of all penalties for marijuana use while being unwilling to make the use of marijuana legal with the attendant quality control of the product. Lester Grinspool of Harvard (8, p. 22) reconciles some of the inconsistencies in the report by the wry comment that "the recommendations derive not solely from medical, psychological, and social considerations but from political realities as well."
An examination of the social science journals of the last four years yields a number of studies relevant to this study. Eight studies will be reviewed briefly.

"The Prevention of Drug Abuse by Young People: An Argument Based on the Distribution of Drug Use," (15) a study by Reginald Smart, Paul Whitefield and Lucien LaForest reported the distribution of drug use in five large scale studies of high school students in Canada. Two schools in the total sample of 27,022 students included the seventh grades and one included the sixth grade. Among the students who used drugs there were many light users, fewer moderate users, and even fewer heavy users (15, p. 14). The curve of frequency of use was continuous and there was no clear differentiation into users and abusers. A definition, then, of drug abuse by extent of use has to be arbitrarily set at some amount. "The numbers of drug abusers cannot be reduced unless per capita consumption of drugs falls. People in general will have to use fewer drugs in order to prevent adolescent drug abuse in the next generation" (15, p. 14).

"Patterns of Adolescent Drug Use in Middle America," (9) by David Hager, Arthur Vener, and Cyrus Stewart, was an investigation of drug use among 4,220 white adolescents in three nonmetropolitan, noncollege communities of the midwestern United States. They found that drug use may begin at some age prior to thirteen and use increases with age. The greatest increase in use occurred between fifteen and
sixteen years of age. This seems to indicate a greater need at this age for "affiliation with an identity source--such as a deviant reference group--where such behavior offers a measure of security and competence" (9, p. 296). Implications of the study include the "need to investigate drug use and to launch preventive programs in the elementary grades" (9, p. 296).

In a delightfully written article "To Wear a Nostradamus Hat: Drugs and America," (3) Richard Blum examines how our present secularized society occasions the use of drugs to meet private needs and fantasies (3, p. 92). The trend is toward reduced stimulation in what Blum calls (3, p. 98) a "quest for quiescence." The forecast for the United States, according to Blum (3, pp. 100-101), is perhaps a quieter, less aggressive, privately preoccupied public made up of a larger percentage of addicts.

The purpose of a study by Ian Hindmarch, "The Patterns of Drug Abuse Among School Children" (11), was to investigate the drug-using habits of school age drug users. The final sample used numbered 103 British children who used drugs. Eighty five percent of these children had taken amphetamines. Children were reluctant to talk to anyone except a friend about drug use--few indicated they would talk with a doctor, school teacher or parent (11, p. 25). Hindmarch concluded that "it would seem . . . that the emphasis in Great Britain should be changed to the abuse of pills in general, and the
amphetamines in particular" (11, p. 26).

"Attitudes of Fifth Grade Students to Illicit Psychoactive Drugs," (14) a study by Donald Richardson, Philip Nader, Klaus Roghmann, and Stanford Friedman delineated the results of a questionnaire given on three different occasions to two fifth grade classes in a suburban Rochester, New York school. One class served as a control. The fifth grade students held negative views towards drugs. These attitudes were only slightly influenced by a drug education course (14, p. 390). Fifth grade students did not understand complicated pharmacology and drug classifications (14, p. 391). They were able, however, to talk accurately and meaningfully about why people take drugs (14, p. 391). Because fifth grade children already have very negative attitudes towards drug abuse, a drug education course need not emphasize negative attitudes towards illicit psychoactive drugs (14, p. 391). Why elementary schoolchildren have this negative attitude is not clear. Richardson (14, p. 390) suggests that one possibility in this area is that "the pre-adolescent typically reflects his parents' value system and this may change rapidly during early adolescence."

A study to answer the question, "Does being urban, poor, black, or female affect youth's knowledge and/or attitudes relating to drugs?" was undertaken by Edward Braxton and Robert Yonker (4). Five hundred sixty-nine students of grades five to eleven in five cities, ranging in size from
one of the most populous cities in the United States, to a small community of five thousand, responded to the questionnaire (4, p. 186). Where possible, equal numbers of disadvantaged and middle-class students in the same city were sampled. No differences were found between recency of drug education and correct knowledge about drugs (4, p. 186). Students in small cities held more correct knowledge than did students in very large cities. Likewise, students in large cities held more correct knowledge than did students in very large cities (4, p. 186). Race was designated by the percentage of whites and/or non-whites in a group. Groups that had a majority or more of whites scored higher in knowledge levels than did the groups composed of 75 to 90 percent non-whites (4, p. 187).

All students, advantaged and disadvantaged, involved in the survey were concerned about illegal sales and distribution of drugs and a high percentage favored stiff jail sentences for persons engaged in illegal sales. They were actively interested in helping a friend who was having a drug problem. Most would seek help for friend or self, first from doctors and ministers and second, from teachers and parents (4, p. 187).

In an article adapted from a paper read at the United Nations Conference on Drugs in Modern Society which was held in Geneva, December 1972, (10) Richard Hartnoll and Martin Mitcheson surveyed "Attitudes of Young People Towards Drug Use" based on the various studies done of British young people (10, p. 9). They cited studies that indicated school children have mistaken understandings about dangers of drugs.
Most of the misinformation appeared to come from the mass media. Hartnoll (10, p. 21) suggested the advisability of discussions with communication sources in order to encourage a more balanced and accurate coverage of drug issues. Correct information appears vital because exaggerated denunciations may cause children to disregard valid warnings (10, p. 21).

"A Cross-cultural Study of the Prevalence and Correlates of Student Drug Use in the United States and Mexico" (16) was made by David Wellisch and Ray Hays. A sample of 2,277 eleventh and twelfth grade students in Houston, Texas was compared with one of 229 students in Monterrey, Mexico, aged fifteen to eighteen years. Though this study was made of high school aged students, its findings have references to the influences surrounding earlier life. The cross-cultural similarity of responses to the question on life plan or goal indicated that drug abuse was "symptomatic of lack of direction in the life of an individual" (16, p. 39). "Frequency of attendance at religious services was a significant covariate in relation to drug use in both . . . samples" (16, p. 38). In Monterrey twenty percent of the drug-users did not attend church at all. In Houston thirty-five percent of drug-users never attended church. A significant difference between the two cultural samples was also apparent in answers as to whom they would go for help with a drug problem. Houston students listed first a friend (41 percent); second a parent (26 percent); third a professional person (21 percent);
fourth a religious advisor (9 percent); and last a teacher (3 percent). Monterrey students, in contrast, listed first their parents (52 percent); second a friend (18 percent); third a professional (17 percent); fourth a religious advisor (7 percent); and last a teacher (6 percent). Apparently Houston drug-users experienced more distrust and distance from parents than did the Monterrey students. Both samples placed teachers as the least desirable persons to go to with a drug problem (16, p. 40).
CHAPTER BIBLIOGRAPHY


4. Braxton, Edward R. and Robert J. Yonker, "Does Being Urban, Poor, Black, or Female Affect Youth's Knowledge and/or Attitudes Relating to Drugs?" The Journal of School Health, 43 (March, 1973), 185-188.


CHAPTER III

RESEARCH HYPOTHESES AND METHODOLOGY

In order to further an understanding of pre-adolescent children's drug knowledge levels and attitudes toward drug abuse, seven hypotheses will be tested in this study. These hypotheses will be concerned with the variables of community of residence, race, acquaintance with drug users, and religiosity as they are compared with the students' knowledge of drugs and their drug abuse attitudes. With some increase in the number of studies now available which are concerned with children and drugs, as evidenced in Chapter II, differing views have been propounded. Information gained in the testing of these hypotheses as they replicate Nations' 1971 study should serve as input into the field of the study of children and drug abuse.

Drug Knowledge

In the study of the relationship between community of residence and knowledge about drugs, early research may be questioned or enlarged by later researchers. The pioneer work of Chein (4) was done in ghetto areas of New York City, which he called high-drug-use areas, and drug knowledge was automatically correlated with residence in a very large city. Hager (7, p. 296) suggests that hard drug use may not be as
severe in some communities as is reported for ghetto areas by Chein. Agreeing with Hager to some extent, Braxton (2, p. 186) found students in small cities scored higher on correct knowledge about drugs than did students from very large cities (population of over half-million) but lower than students from cities 50,000 to half-million in population. But Nations' study (11, p. 37-40) found that the elementary schoolchildren of a rural community, Keene, Texas, held more correct knowledge concerning drugs than did the children of an urban community, Denton, Texas. He had hypothesized just the reverse of these findings. In this study, which replicates Nations' study, it is hypothesized:

Hypothesis 1. Schoolchildren of an urban community will display higher levels of correct knowledge about drugs than will schoolchildren of two rural communities.

Tolerance Toward Drugs

Reasonings leading to the formation of Hypothesis 1 also apply to Hypothesis 2. Additionally, Chein (4, p. 12) found that boys living in the highest drug use area he examined held the most tolerant attitude toward drugs. Wiener (14, p. 159) states that "there were a significantly greater proportion of drug-takers . . . in the very high use area than in the medium area." Also, Wiener hypothesized that "the more specific and accurate the drug knowledge schoolchildren have the more likely they are to take drugs" (14, p. 62); following his testing he accepted the hypothesis
as valid (14, p. 131). Nations (11, p. 47) found that the students of an urban community, Denton, displayed slightly more tolerant attitudes toward the abuse of drugs than did the students of rural Keene. Assuming a higher incidence of correct knowledge will be found among urban children, as is asserted in Hypothesis 1, it is now hypothesized:

**Hypothesis 2.** Schoolchildren of an urban community will display more tolerant attitudes toward drugs than will respondents of two rural communities.

**Racial Attitudes Toward Drugs**

Until the nineteen sixties the drug abuse problem in the United States was, as Clausen has said (5, p. 206), "entwined with minority-group status." But by 1971 the Bureau of Narcotics and Dangerous Drugs reported (9, p. 29) that 51 percent of all addicts were white. Wellisch's 1971 study (13, p. 32) showed the highest prevalence of drug use among Anglos, with Mexican-Americans admitting the second highest use, and blacks reporting the lowest use. However, Nations (11, p. 56) concluded that the racial minority group respondents in his sample did display more tolerant attitudes toward drugs than did white respondents to the .05 level of significance. To test the relationship between race and tolerance toward the use of drugs it is hypothesized:

**Hypothesis 3.** Racial minority group respondents will display more tolerant attitudes toward drugs than will white respondents.
Effect of Knowledge Level on Attitude

The intricacy of the association of knowledge level with attitude is difficult to unravel. One view holds that experimentation with drugs begins in ignorance without "knowing what the drugs are, or what they are supposed to do or how many to take to get the desired effect" (14, p. 61). Statements made by some of the addicts Chein studied (4, p. 154) support the hope that correct knowledge will deter drug use. The respondents in Nations' study (11, p. 54) showing high levels of correct drug knowledge also displayed intolerant attitudes toward drugs to the .05 level of significance.

Another perspective affirms that drug-users have both more knowledge about drugs and more favorable attitudes toward drug use (14, p. 155). "Widespread detailed knowledge" exists, according to Harms, (8, p. 3) among young drug users.

In an attempt to understand more of the complex relationship between drug knowledge and attitudes toward drugs it is hypothesized:

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 Acquainance with Drug Users

Chein found that boys who refused to become involved in use of heroin consistently had friends who mattered to
them who had negative attitudes toward drugs (4, p. 145). Boys who were heroin users had usually been initiated into use, not by an adult pusher, but by one or more boys their own age (4, p. 12). Wiener corroborates this line of thought by reporting that "the group a person belongs to influences the behavior he adopts, provided this group functions as his reference group" (14, p. 159). He further explains that

... the more people school children know who have taken drugs the more likely they are to take drugs; and ... the more times school children have been in the company of other boys and girls who have taken drugs the more likely they are to take drugs (14, pp. 123-124).

And significantly, Wiener found (14, p. 154) that young drug users were less likely to go to parents with a personal problem than to a friend. Hager's study (7, p. 296) found that drug use seems to begin about the age adolescents seem to need to affiliate with some reference group. Hindmarch (9, p. 25) likewise found children reluctant to talk to anyone about drug use except a friend. Blum (1, pp. 272-273) recommends that efforts be made on the part of parents to reduce the peer-group domination of their children. Wellisch reports (13, p. 40) that 41 percent of the young drug-users of his Houston sample ranked a friend as first choice as a helper with a drug problem.

However, in the study done by Nations (11, p. 58) whether or not a child knew one or more actual users of
illegal drugs made no difference in his attitude toward drug abuse.

Assuming that the drug-user has a concomitant tolerant attitude toward drugs and that a young person is influenced by those he knows well and with whom he associates, it is hypothesized, in replicating Nations' study, that:

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

Religiosity, as measured by membership in a church, knowledge of dogma, and degree of participation in formal rituals, is traditionally considered a contributing factor to the normative structure of even young lives. In Chein's study, church attendance by families appears to indicate positive values fostered by individual families. He reports (4, p. 121) that families of non-heroin-users were clearly the most church-going; contrastingly, about a third of the families of users seldom or never went to church. Wellisch's observations (13, p. 38) assess frequency of church attendance as a significant co-variate of intolerance of drug abuse. Among the drug users in the Monterrey sample 20 percent did not attend church at all against 4 percent who went one time or more per week. Of the users in the Houston sample 35 percent never attend church in contrast to 10 percent who attend more than once a week. The LeDain
Commission, as quoted in Brecher's work (3, p. 458), equates drug use in some measure with the collapse of religious values.

In Nations' study of the relationship between affiliation with a religious body and drug knowledge levels the data showed (11, p. 61) that there was a high positive correlation between affiliation with a church and correct knowledge about drugs to the .005 level of significance. When he looked at the relationship between religiosity and attitude toward drug abuse he concluded that the religiosity had no effect on schoolchildren's attitudes toward drug abuse (11, p. 64).

To test whether church affiliation affects knowledge levels and attitudes towards drugs two hypotheses were formulated:

Hypothesis 6. Church affiliation will relate positively to correct drug knowledge levels of elementary schoolchildren.

Hypothesis 7. Church affiliation will have a positive relationship with intolerant attitudes of schoolchildren toward drug abuse.

Communities Studied

Communities chosen in which to conduct this research included the two cities utilized by Nations in his 1971 study, Denton and Keene, Texas, plus the community of Alvarado, Texas, which was added to this 1974 study.

Denton is a city in North Central Texas thirty-eight miles northwest of Dallas and thirty-six miles northeast of
Fort Worth with a 1973 estimated population of 41,177. Two state universities, North Texas State University with an enrollment in excess of 15,000 and Texas Woman's University with an enrollment of over 6,000, are located in Denton. All of this student population is not local; many students commute daily from Dallas, Fort Worth and their encircling suburbs. Twenty-five different religious denominations exist within the community. Because the Department of Public Safety considered Denton a city with "a special problem" with drugs, the city received a federal grant in 1973 ordinarily designed for cities having five times as many men in the criminal investigation division (6, p. 2A). When the grant was made, the Department believed that Denton was the headquarters for at least six major drug warehousing operations (6, p. 2A). Since October 1, 1973 the grant has funded a city drug enforcement unit. A specially trained officer heads the unit's juvenile program. In the period between October 1, 1973 and August 29, 1974 there were 160 arrests by the drug unit; an estimated fifteen to twenty of these arrests involved children aged up to seventeen years (15). The Denton School system began a drug education program in September 1971; this policy was actively pursued through the 1972-1973 school year but was less emphasized in the 1973-1974 school year.

Keene, Texas, with a population of 2,440, is a rural community in Johnson County about thirty miles south of
Fort Worth and forty-four miles southwest of Dallas. It is the site of Southwestern Union College, a private institution operated by the Seventh Day Adventist church, with an enrollment of 550 resident students. In 1971 only one elementary school existed in Keene, the Adventist Elementary School which Nations used in his research. There is now a small public school in Keene but children from this school were not tested in the 1974 research—only the fifth and sixth grade students in the Adventist Elementary School. It is estimated that 96 percent of the residents of Keene are members of the Seventh Day Adventist church (11, p. 19). Racial differences are minimal. During the period from September 1973 to September 1974 there were four arrests for violations of dangerous drug and narcotics laws in Keene. (See Appendix IV for a complete description of the violations.)

Alvarado, Texas, a town of 2,129 population east of Keene some five miles and in the same county, is situated where U. S. Highway 67 intersects Interstate 35W. Where Keene is intensely homogeneous religiously and racially, Alvarado has a variety of churches (at least eight) and the school system is more racially balanced with measurable proportions of Mexican-American and black students. Arrest figures for drug law violations in Alvarado have not been made available to this study. The Alvarado school system conducted an attitudinally based drug education program
during the 1973-1974 school year. The students tested by this research had all participated in the program. (See Appendix III for the Alvarado course of study.)

Sample

Choice of children in grades five and six to serve as respondents to the research instrument was decided on the basis of their pre-adolescent age, their lack of exposure to the wider, peer-pressured world of junior high school, and their ability to read and understand questionnaires. The total sample size was 294; 90 (31 percent) were Denton students, 70 (24 percent) were Keene Students, and 134 (45 percent) were Alvarado students. (See Table I for the manner in which the 1974 sample was distributed by school class.) At the time of testing 158 (54 percent) were fifth grade students and 136 (46 percent) were sixth grade students.

Racial make-up of the sample was 83 percent white, 8.5 percent black and 8.5 percent Mexican-American. This ratio compares favorable with the 1972 Fort Worth SMSA (Tarrant and Johnson counties) racial balance of 83 percent white, 11 percent black and 6 percent Spanish surnamed and the 1972 Dallas SMSA (Dallas, Denton, Collin, Ellis, Kaufman and Rockwall counties) racial composition of 76 percent white, 16 percent black, and 8 percent Spanish surnamed.
TABLE I
DESCRIPTION OF SAMPLE BY CLASS GRADE, SCHOOL, CITY AND NUMBER OF RESPONDENTS

<table>
<thead>
<tr>
<th>Class Grade</th>
<th>School</th>
<th>City</th>
<th>Number of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fifth Grade</td>
<td>Stonewall Jackson</td>
<td>Denton</td>
<td>26</td>
</tr>
<tr>
<td>Sixth Grade</td>
<td>Stonewall Jackson</td>
<td>Denton</td>
<td>20</td>
</tr>
<tr>
<td>Fifth Grade</td>
<td>Jefferson Davis</td>
<td>Denton</td>
<td>22</td>
</tr>
<tr>
<td>Sixth Grade</td>
<td>Jefferson Davis</td>
<td>Denton</td>
<td>22</td>
</tr>
<tr>
<td>Fifth Grade</td>
<td>Keene Adventist</td>
<td>Keene</td>
<td>38</td>
</tr>
<tr>
<td>Sixth Grade</td>
<td>Keene Adventist</td>
<td>Keene</td>
<td>32</td>
</tr>
<tr>
<td>Fifth Grade</td>
<td>Alvarado Intermediate</td>
<td>Alvarado</td>
<td>72</td>
</tr>
<tr>
<td>Sixth Grade</td>
<td>Alvarado Intermediate</td>
<td>Alvarado</td>
<td>62</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td><strong>294</strong></td>
</tr>
</tbody>
</table>

Religious affiliation of the children in the sample was 30 percent Baptist, 23 percent Seventh Day Adventist, 9 percent Pentecostal-Nazarene groups, 8 percent no religious affiliation, 7 percent Church of Christ, 6 percent Methodist, 5 percent Catholic, 3 percent Unitarian, 2 percent illegible, 2 percent no answer, and one percent in each of the Mormon, Jehovah's Witness, Christian, Lutheran, and Presbyterian churches. (See Table II for an analysis of the sample by city of residence, age, race, and church affiliation, p. 39).

Data Collection

After securing the cooperation of the school administrations during the spring of 1974, actual collection of
TABLE II
PERCENT OF TOTAL SAMPLE OF STUDENTS BY CITY OF RESIDENCE, AGE, RACE, AND CHURCH AFFILIATION

<table>
<thead>
<tr>
<th>Variable</th>
<th>City of Residence</th>
<th>Denton n=90</th>
<th>Keene n=70</th>
<th>Alvarado n=134</th>
<th>Total N=294</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9 years</td>
<td>.34</td>
<td>. .</td>
<td>. .</td>
<td>. .</td>
<td>.34 n=1</td>
</tr>
<tr>
<td>10 years</td>
<td>4.42</td>
<td>1.7</td>
<td>5.79</td>
<td>11.91 n=35</td>
<td></td>
</tr>
<tr>
<td>11 years</td>
<td>13.61</td>
<td>10.54</td>
<td>20.07</td>
<td>44.22 n=130</td>
<td></td>
</tr>
<tr>
<td>12 years</td>
<td>10.2</td>
<td>9.52</td>
<td>14.63</td>
<td>34.35 n=101</td>
<td></td>
</tr>
<tr>
<td>13 years</td>
<td>2.04</td>
<td>2.04</td>
<td>4.76</td>
<td>8.84 n=26</td>
<td></td>
</tr>
<tr>
<td>14 years</td>
<td>. .</td>
<td>. .</td>
<td>. .</td>
<td>.34 n=1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>30.61</td>
<td>23.8</td>
<td>45.59</td>
<td>100.00</td>
<td></td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>23.5</td>
<td>22.4</td>
<td>36.7</td>
<td>82.7 n=243</td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>3.7</td>
<td>. .</td>
<td>4.8</td>
<td>8.5 n=25</td>
<td></td>
</tr>
<tr>
<td>Mex.-Amer.</td>
<td>3.1</td>
<td>1.4</td>
<td>4.1</td>
<td>8.5 n=25</td>
<td></td>
</tr>
<tr>
<td>No response</td>
<td>.3</td>
<td>. .</td>
<td>. .</td>
<td>.3 n=1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>30.6</td>
<td>23.8</td>
<td>45.6</td>
<td>100.00</td>
<td></td>
</tr>
<tr>
<td>Church</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baptist</td>
<td>12.59</td>
<td>. .</td>
<td>18.03</td>
<td>30.62 n=90</td>
<td></td>
</tr>
<tr>
<td>Methodist</td>
<td>1.36</td>
<td>. .</td>
<td>4.42</td>
<td>5.78 n=17</td>
<td></td>
</tr>
<tr>
<td>Presbyterian</td>
<td>.68</td>
<td>. .</td>
<td>. .</td>
<td>.68 n=2</td>
<td></td>
</tr>
<tr>
<td>Lutheran</td>
<td>1.02</td>
<td>. .</td>
<td>. .</td>
<td>1.02 n=3</td>
<td></td>
</tr>
<tr>
<td>Christian</td>
<td>.34</td>
<td>. .</td>
<td>.68</td>
<td>1.02 n=3</td>
<td></td>
</tr>
<tr>
<td>Church of Christ</td>
<td>2.72</td>
<td>. .</td>
<td>4.08</td>
<td>6.8 n=20</td>
<td></td>
</tr>
<tr>
<td>Seventh Day Adventist</td>
<td>. .</td>
<td>23.47</td>
<td>. .</td>
<td>23.47 n=69</td>
<td></td>
</tr>
<tr>
<td>Catholic</td>
<td>3.4</td>
<td>. .</td>
<td>1.36</td>
<td>4.76 n=14</td>
<td></td>
</tr>
<tr>
<td>Jehovah's Witnesses</td>
<td>.68</td>
<td>. .</td>
<td>. .</td>
<td>.68 n=2</td>
<td></td>
</tr>
<tr>
<td>Nazarene-Pente costal groups</td>
<td>3.06</td>
<td>.34</td>
<td>5.78</td>
<td>9.18 n=27</td>
<td></td>
</tr>
<tr>
<td>Unitarian</td>
<td>.68</td>
<td>. .</td>
<td>2.04</td>
<td>2.72 n=8</td>
<td></td>
</tr>
<tr>
<td>Mormon</td>
<td>.68</td>
<td>. .</td>
<td>. .</td>
<td>.68 n=2</td>
<td></td>
</tr>
<tr>
<td>No church</td>
<td>2.04</td>
<td>. .</td>
<td>6.12</td>
<td>8.16 n=24</td>
<td></td>
</tr>
<tr>
<td>No answer</td>
<td>1.02</td>
<td>. .</td>
<td>1.7</td>
<td>2.72 n=8</td>
<td></td>
</tr>
<tr>
<td>Illegible</td>
<td>.34</td>
<td>. .</td>
<td>1.34</td>
<td>1.7 n=5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>30.61</td>
<td>23.81</td>
<td>45.57</td>
<td>99.99</td>
<td></td>
</tr>
</tbody>
</table>
of data began in May. The Denton students, each class separately, responded to the questionnaires on May 3, 6, and 7. Then on May 15, the Keene Adventist students were assembled in the school library and filled out the questionnaires during one class period. The afternoon of the next day the Alvarado students met in a large cafeteria room and the questionnaires were administered to all of them in one session.

All 294 students received identical fifty-five item questionnaires to be answered anonymously. Instructions and survey questions were read aloud by the investigator while the respondents followed the reading and marked their responses. Time required for each administration was approximately thirty minutes.

Terminology

The definition of the term drug as used in this study is one given by Laurie (14, p. 3), "any chemical substance that alters mood, perception or consciousness and is misused, to the apparent detriment of society."

Drug abuse, for the purpose of this research is defined "as a pattern of behavior in which drugs are used non-medically to alleviate some pain or distress or to achieve some detachment from personal problems, or a mystical or religious experience" (11, p. 26).
Though the phrase drug addiction is not used in the instrument of this study it is implied a number of times and needs definition. This research, as did the 1971 study (11, p. 27), accepts the definition of the World Health Organization.

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.

Other drug argot used in the questionnaire are defined as follows:

- **joint**—marijuana cigarette
- **turning on**—to come under the influence of drugs
- **pot**—marijuana
- **busted**—arrested for use or possession of drugs
- **speed**—methamphetamine
- **pusher**—drug peddler

The Instrument

The survey questionnaire used in this study was devised by James Nations (see Appendix I for a complete copy of the questionnaire). The first eleven items asked for age, racial group, father's occupation, mother's occupation, father's schooling, mother's schooling, church affiliation, 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 towards drugs were interspersed throughout the questionnaire. Items which measured the knowledge level of the students were 12, 13, 19, 20, 22, 23, 24, 25, 26, 27, 33, 42, 43, 45, and 55. Questions 23, 24, 25, 26, 27, and 55 relate to knowledge of drug jargon. The remaining knowledge-related questions reveal general drug knowledge. Both categories, jargon and general, were combined and used in scoring and ranking the students on the level of drug knowledge. None of these fifteen drug knowledge questions was considered more important than the others; rather, each question was weighted on the drug knowledge scale according to the number of possible responses. As an example, the most correct answer to question twelve is the combination of answers two and three, for which the student receives five points on the knowledge level scale. Question twelve and its answers follow:

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

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

Respondents were informed in the instructions by the
researcher that they might circle more than one answer if they thought that to be the best answer to the specific question. The range of scores on the drug knowledge scale was from 0 to 21.

The drug attitude scale was similarly constructed and was made up of questions 14, 15, 16, 17, 18, 31, 32, 35, 36, 44, 46, 47, 48, 49, 50, 51, 52, 53, and 54. These questions ranged in value from one point to five points; the range of the scale was from 0 to 49 with the highest score indicating the most negative attitude toward drugs. Thus, the higher the score on the drug attitude scale the more the student disapproved of the use of illegal drugs. Inversely, a score of zero would imply the most tolerant attitude toward drugs possible on this attitude scale.

Using question seventeen as an example,

17. 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," scores 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 neutral value so as to avoid skewing the attitude score. Appendix II gives a complete break-down, question by question, of both the knowledge scale and the attitude scale which were used.
Each of the 294 questionnaires was coded by keypunching onto IBM cards. The BMD02S program was employed in analyzing the data. This program computes chi square for the variables to be compared. The chi square test evaluates whether or not observed frequencies differ significantly from those which would be expected under a certain set of theoretical assumptions. The most common application of chi square is in contingency problems in which two nominal-scale variables have been cross-correlated. Chi square tells nothing of direction. The number of cases should be large (theoretical frequencies not less than five) in order to use chi square. The numerical value is almost infinite.

Output from the computer program also included the contingency coefficient for the contingency tables. The contingency coefficient is a measure of association based on chi square and is zero when the variables are independent. The upper limit of the contingency coefficient depends on the number of rows and columns, but is always less than one. Contingency coefficient is used with 5 x 5 tables or more. When computed for one table it cannot be compared with contingency coefficient computed for another table size.
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15. Wilson, James, Denton Police, personal interview, Denton, Texas, August 29, 1974.
CHAPTER IV

RESULTS OF VARIABLE COMPARISONS AND TESTING OF HYPOTHESES

Drug Knowledge Levels

The first hypothesis of this research proposed that schoolchildren of an urban community would display higher levels of correct drug knowledge than would schoolchildren of two rural communities. The drug knowledge level scale was determined by 15 specific questions on the survey instrument and the scores were classified in four groups with a score of 1 through 5 being considered Very Low knowledge, 6 through 10 considered Low knowledge, 11 through 15 considered Intermediate knowledge, and 16 through 21 considered High knowledge. A majority of the total sample, 61 percent, scored in the Intermediate range. One percent of the sample scored Very Low, 17 percent scored Low, and 11 percent scored High. But, a comparison of the knowledge levels of the schoolchildren from Denton (the urban community) with the combined Keene-Alvarado (rural communities) students shows that the Keene-Alvarado children hold more correct knowledge about drugs than do the Denton children ($x^2 = 7.344$, df = 3, $p < .10$). Table III gives the test data on these variables.
The results of this testing do not support the first hypothesis. Instead, the children from the smaller communities appear significantly better informed in correct knowledge about drugs.

The fact that children from rural communities are better informed about drugs generates a number of questions which a study of the aggregate data from the survey can answer regarding this sample of children. Do the students of Keene and Alvarado score similarly? How do Keene and Denton students compare? How do Denton and Alvarado children compare? How significant are differences between the three communities? Another area of questions arises when an attempt is made to locate the sources of correct drug knowledge. Where do the children say they have learned the most about drugs? Do these answers correlate with the correct knowledge levels? What variables do correlate with high knowledge scores? Brief summaries of data relevant to these questions appear to be beneficial to this overall study.
Scrutiny of the comparison of the drug knowledge levels of the students from Keene and Alvarado with their community of residence "pin-points" the community with the highest drug knowledge scores. When Intermediate knowledge level scores are combined with High knowledge level scores, 82.09 percent of the Alvarado children score in that combined category in contrast to 62.85 percent of the Keene students who score as Intermediate-High knowledge. The differences between the knowledge level of the Alvarado students and the Keene students is significant at the .025 level. (See Table IV.)

TABLE IV

KNOWLEDGE LEVEL COMPARED WITH RESIDENCE IN RURAL COMMUNITIES

<table>
<thead>
<tr>
<th>Community</th>
<th>Very Low</th>
<th>Low</th>
<th>Intermediate</th>
<th>High</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Keene</td>
<td>2.86</td>
<td>34.29</td>
<td>55.71</td>
<td>7.14</td>
<td>100</td>
</tr>
<tr>
<td>Alvarado</td>
<td>.75</td>
<td>17.16</td>
<td>70.15</td>
<td>11.94</td>
<td>100</td>
</tr>
</tbody>
</table>

\[ x^2 = 9.739, \, df = 3, \, p < .025 \]

More differences exist between Keene students and Alvarado students than are shown between the Keene-Alvarado students combined, compared with the Denton students. It appears that other variables, in addition to community of residence, need to be considered.

The insufficiency of one variable, community of residence, is further indicated when the drug knowledge levels of Denton
students are compared with the Keene students. It will be remembered that Nations' sample was made up of Denton and Keene students. In his sample, the Keene children displayed more correct knowledge than did the Denton children to the .10 level of significance. This is not true of the sample of students tested in this research; no significant difference exists between the knowledge levels of Denton children and Keene children \( (x^2 = 3.367, \text{df} = 3, p < .50). \)

When the knowledge levels of Denton students are compared with Alvarado children, however, striking differences exist between these two groups \( (x^2 = 11.637, \text{df} = 3, p < .01). \) Though 11.11 percent of the Denton students made a score of High knowledge which compares closely with the 11.94 percent of Alvarado students scoring High knowledge, a whopping 70.15 percent of the Alvarado students scored in the Intermediate range while 52.22 percent of the Denton students scored in the Intermediate category.

When drug knowledge levels of all the student sample are compared with the three communities of residence there is a significant relationship shown \( (x^2 = 16.899, \text{df} = 6, p < .01). \) Table V, on page 51, presents the data for these variables in both percentages and raw scores.

These findings indicate a relationship between the community of residence and correct drug knowledge among this sample of children. However, care must be taken to identify other factors which cluster within any community
and relate also to drug knowledge levels.

A comparison of the sample by school grade shows that the combined fifth grade students of all the schools scored approximately the same as the combined sixth grade students with no statistically significant difference ($x^2 = 2.708$, df = 3, $p < .50$). Grouped together, 68.35 percent of the fifth grade students scored in either the Intermediate or the High categories of the knowledge scale. The corresponding percentage for the sixth grade students is a slightly higher 75.74. The highest class scores are those of the sixth grade class of Alvarado with 90.3 percent of those students scoring in either the Intermediate or High classification. This class is followed by the fifth grade Alvarado class with an Intermediate-High percentage of 75.1. The third highest scores were obtained by the Stonewall Jackson sixth grade class in Denton with 75 percent scoring in
the Intermediate-High grouping. The fifth grade Stonewall Jackson class of Denton follows with 73 percent scoring in the same categories; the sixth grade of Keene Adventist school had 68.8 percent scoring Intermediate-High; the fifth grade of Jefferson Davis in Denton had 58.9 percent; the fifth grade of Keene Adventist school had 57.8 percent; and the sixth grade of Jefferson Davis in Denton had 45.3 percent scoring in the Intermediate-High group.

With some understanding of which students recorded the highest scores on the drug knowledge scale, questions remain as to the sources of the acquired knowledge. It was expected that one source of drug knowledge might be information received in clubs or youth groups. The tenth item on the questionnaire was used to determine if the respondent was a member of a club or youth group and, if so, he was asked to name the group or groups. It is not surprising that children of this age often are still closely tied to the social life of home and school. So 145 (49 percent) of the students said they were not members of any clubs or groups. The 149 students who were involved in groups listed eighteen different clubs and associations to which they belonged. As some students were in two and three groups it seemed appropriate to classify students as being members of one group, two groups, three groups and more than three groups. Thirty-eight percent of the sample listed membership in one group, 10 percent were members of two
groups, two percent had joined three groups, and one percent (n=1) was really socially active and listed more than three groups. Of the children holding group membership, only 26 (8.8 percent of the sample) reported that they had been taught anything about drugs at a group meeting. These data correlate negatively with drug knowledge levels to the .25 level of significance ($x^2 = 40.1651$, df = 32, $p > .25$).

An obvious way to learn the source of drug knowledge is simply to ask the source. This was done in item 21 of the questionnaire.

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. from other places not listed here

It was possible to respond that knowledge had come from one or more of these sources. Seven percent of the sample indicated they considered their knowledge came from three or more of these sources--some checking all five possibilities. Because there were many multiple answers, responses were categorized in the following manner: School only, Parents only, School and parents, Church only, Friends only, Media and other sources, Parents and the media, School and the media, and Three or more sources.

In order to find the relationship between the students' perceptions of their knowledge sources and the amount of accurate drug knowledge possessed, the data for these
variables were compared. The data used in this correlation are found in Table VI.

**TABLE VI**

**SOURCE OF KNOWLEDGE COMPARED WITH KNOWLEDGE LEVEL**

<table>
<thead>
<tr>
<th>Source of Knowledge</th>
<th>Number of Students per Knowledge Level</th>
<th>Very Low</th>
<th>Low</th>
<th>Intermediate</th>
<th>High</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Media &amp; other Sources</td>
<td></td>
<td>2</td>
<td>27</td>
<td>46</td>
<td>4</td>
<td>n= 79</td>
</tr>
<tr>
<td>School only</td>
<td></td>
<td>1</td>
<td>15</td>
<td>46</td>
<td>14</td>
<td>n= 76</td>
</tr>
<tr>
<td>Parents only</td>
<td></td>
<td>...</td>
<td>16</td>
<td>30</td>
<td>8</td>
<td>n= 54</td>
</tr>
<tr>
<td>School &amp; Parents</td>
<td></td>
<td>...</td>
<td>7</td>
<td>13</td>
<td>1</td>
<td>n= 21</td>
</tr>
<tr>
<td>Three or more Sources</td>
<td></td>
<td>...</td>
<td>6</td>
<td>12</td>
<td>2</td>
<td>n= 20</td>
</tr>
<tr>
<td>Friends only</td>
<td></td>
<td>...</td>
<td>1</td>
<td>13</td>
<td>1</td>
<td>n= 15</td>
</tr>
<tr>
<td>School &amp; media</td>
<td></td>
<td>...</td>
<td>5</td>
<td>8</td>
<td>1</td>
<td>n= 14</td>
</tr>
<tr>
<td>Parents &amp; media</td>
<td></td>
<td>...</td>
<td>3</td>
<td>9</td>
<td>...</td>
<td>n= 12</td>
</tr>
<tr>
<td>Church</td>
<td></td>
<td>...</td>
<td>...</td>
<td>3</td>
<td>...</td>
<td>n= 3</td>
</tr>
</tbody>
</table>

\[ x^2 = 130.0651, \text{ df } = 128, \text{ p } < .50 \]

The most frequently named source of drug knowledge given by these children was the Media and other sources. Of the 79 children who gave this answer only 5.1 percent scored in the High knowledge category. In contrast, of the 76 students who listed School only as their source of knowledge, 18.4 percent scored as High knowledge. The third most common answer, made by 54 students, was Parents. Of those checking Parents only, 14.9 percent scored in the High knowledge bracket. Of the 21 students who listed both
School and parents 4.8 scored as High knowledge. Of students checking Three or more sources, 10 percent scored in the High knowledge category. Though it is to these sources, listed in Table VI, the children attributed their knowledge about drugs there is no significant relationship between the sources of drug knowledge investigated and correct drug knowledge ($x^2 = 130.0651$, df = 128, $p < .50$).

Other variables were also compared with the levels of correct knowledge. Item 39 of the questionnaire dealt with whether a child had received information about drug use from a minister.

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

Answers to item 39 compared with drug knowledge levels revealed no statistically significant relationship between the variables ($x^2 = 29.2524$, df = 32, $p < .50$).

Item 40 of the questionnaire established whether teachers or principals had transmitted information about drugs.

40. My school teacher or principal has talked to me about the use of drugs.
   ____yes
   ____no

Although 75 percent of the sample answered yes to item 40, only 11 percent of the affirmative students scored High in knowledge while, of those who answered negatively, 10 percent scored High. Comparison of the responses to item 40
with drug knowledge level scores indicated no statistically significant correlation between school personnel teaching about drug use and correct knowledge \( (x^2 = 19.5332, \text{df} = 32, p < .975) \).

Another item, number 37, examined source of knowledge also.

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

Responses to Item 37 compared with drug knowledge levels show, again, no statistically significant relationship between interested parents talking about drugs and correct knowledge \( (x^2 = 24.8902, \text{df} = 32, p < .90) \).

However, there were replies to questionnaire items which yielded significant correlations when compared with drug knowledge levels. These are not sources in themselves, but these variables correlate significantly with high knowledge about drugs. The frequency of church attendance is one of these variables and was known through Item 8.

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

Frequency of church attendance was significantly related to correct drug knowledge level \( (x^2 = 102.3446, \text{df} = 80, p < .05) \).

Item 38 investigated the child's perception of parental attitude about drug use. Response to perceived parental
disapproval compared to knowledge levels resulted in a very strong correlation.

38. My parents are against the use of illegal drugs.
   ___ yes
   ___ no

Testing of the variable of parental view of drugs with drug knowledge level showed a significant relationship ($x^2 = 49.6943$, $df = 32$, $p < .025$) between parents' disapproval of drugs and correct knowledge about drugs. Apparently children are influenced by parental values.

In contrast, however, acquaintance with numbers of drug users the same age as the children in the sample was found also to be related to high knowledge scores ($x^2 = 15.8387$, $df = 12$, $p < .20$).

In summary of the data on drug knowledge levels it may be reiterated that Hypothesis 1 was not supported by the data because the children in the rural communities scored higher than did the urban children. In searching for the sources of correct knowledge, neither group membership, students' perceptions of knowledge sources, instruction from ministers, instruction from school personnel, nor parental instruction were significantly related to high drug knowledge levels. But community of residence, frequency of church attendance, perceived parental disapproval of drug use, and acquaintance with numerous drug users of fifth and sixth grade age correlate meaningfully with high drug knowledge levels.
Attitude Toward Drug Abuse

The second hypothesis of this study proposed that schoolchildren of an urban community would display more tolerant attitudes toward drugs than would respondents of two rural communities. From the students' responses to nineteen special 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 devised so that the higher the score, the more negative the attitude toward drug abuse. Scores were classified into five groups with 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, 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.

When the attitudes toward drug abuse of the Denton (an urban community) students were compared with the attitudes of the combined Keene-Alvarado (rural communities) students, the Denton children held more tolerant views of drugs than did the Keene-Alvarado children ($x^2 = 9.8544$, $df = 2$, $p < .01$). Hypothesis 2 is supported by the results of this correlation. An analysis of these findings is presented in Table VII on page 59.
TABLE VII
ATTITUDES TOWARD DRUG ABUSE COMPARED WITH COMMUNITY OF RESIDENCE

<table>
<thead>
<tr>
<th>Community</th>
<th>Number of Students per Attitude Category</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Highly Tolerant</td>
</tr>
<tr>
<td>Denton</td>
<td>. . .</td>
</tr>
<tr>
<td>Keene-Alvarado</td>
<td>. . .</td>
</tr>
</tbody>
</table>

\[ x^2 = 9.8544, \text{df} = 2, \ p < .01. \]

Though Denton students did manifest more tolerant attitudes than the combined children from the rural communities, they are by no means tolerant of drugs. This whole sample of fifth and sixth grade children is resoundingly negative in attitudes towards drug abuse. The majority of the students (68.7 percent) scored within the Intolerant attitude classification. No student scored lower than 20 on the attitude scale; this means that no student scored within either the Tolerant group or the Highly Tolerant group. Eleven and six-tenths percent of the students scored in the Intermediate group (the Intermediate score is the most tolerant score of this sample); and 19.7 percent scored in the Highly Intolerant group. That the Denton children appear as more tolerant than the rural children should not be construed to mean that they are tolerant of drug abuse. Denton students, in fact, scored more intolerantly than did the Keene children; 85.6 percent of the
Denton students are classified as either Intolerant or Highly Intolerant while 82.86 percent of the Keene students scored in these categories. The stronghold of intolerance toward drugs is found in the Alvarado students; 93.28 percent of the Alvarado students made scores of Intolerant or Highly Intolerant. Table VIII gives an analysis of these variables.

**TABLE VIII**

**ATTITUDES TOWARD DRUG ABUSE BY CITY OF RESIDENCE**

<table>
<thead>
<tr>
<th>Community</th>
<th>Attitude Level by Percent</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Highly Tolerant</td>
<td>Tolerant</td>
<td>Intermediate</td>
<td>Intolerant</td>
<td>Highly Intolerant</td>
<td></td>
</tr>
<tr>
<td>Denton</td>
<td>. . .</td>
<td>. . .</td>
<td>14.44</td>
<td>76.67</td>
<td>8.89</td>
<td>100</td>
</tr>
<tr>
<td>Keene</td>
<td>. . .</td>
<td>. . .</td>
<td>17.14</td>
<td>52.86</td>
<td>30.00</td>
<td>100</td>
</tr>
<tr>
<td>Alvarado</td>
<td>. . .</td>
<td>. . .</td>
<td>6.72</td>
<td>71.64</td>
<td>21.64</td>
<td>100</td>
</tr>
</tbody>
</table>

\[ x^2 = 18.1608, \ df = 4, \ p < .01 \]

N=294

The replies to questionnaire items concerning group membership, source of knowledge, number of known users who were grade school aged, teaching by a minister or by teachers, when compared with attitudes toward drugs revealed no statistically significant correlation between any of these variables and intolerance of drugs. However, as just discussed, the city of residence compared with attitude was statistically significant to the .01 level. (Refer back to Tables VII and
VIII). Additionally, when children responded about parents' interest in talking about drugs, these answers correlated significantly with intolerant attitudes ($x^2 = 9.0082$, df = 4, $p < .05$). Responses indicating their parents were against illegal drug use was slightly correlated with drug intolerance ($x^2 = 6.7869$, df = 4, $p < .20$).

Other variables, not yet discussed, which relate to attitudes about drug abuse include racial identity (to be looked at in the discussion of Hypothesis 3), acquaintance with drug users (which will be dealt with in the investigation of Hypothesis 5), and church membership and church attendance (which will be explained in the discussion of Hypotheses 6 and 7).

Race and Attitude Toward Drugs

Based on the assumptions that white children would display both higher levels of knowledge about drugs and more intolerant attitudes toward drug abuse than would minority group students, Hypothesis 3 proposed that racial minority respondents would show more tolerant attitudes toward drugs than would white respondents. But the white students of this sample do not possess more correct knowledge of drugs than do minority group students. Comparison of drug knowledge levels with racial identity showed no significant relationship between race and drug knowledge level ($x^2 = 42.1994$, df = 48, $p < .75$). Table IX pictures the
lack of association between these variables.

TABLE IX

RACE COMPARED TO KNOWLEDGE LEVEL

<table>
<thead>
<tr>
<th>Race</th>
<th>Very Low</th>
<th>Low</th>
<th>Intermediate</th>
<th>High</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>1.23</td>
<td>25.93</td>
<td>61.32</td>
<td>11.52</td>
<td>100%</td>
</tr>
<tr>
<td>Black</td>
<td>...</td>
<td>44.0</td>
<td>52.0</td>
<td>4.0</td>
<td>100%</td>
</tr>
<tr>
<td>Mexican-Amer.</td>
<td>...</td>
<td>24.0</td>
<td>68.0</td>
<td>8.0</td>
<td>100%</td>
</tr>
</tbody>
</table>

\[ x^2 = 42.1994, \text{df} = 48, p < .75 \]

Even though there is not a statistically significant difference between the drug knowledge levels of white and minority group students, as was assumed in the formation of Hypothesis 3, data from this survey tend to support Hypothesis 3. Comparison of race with attitude levels found racial minority students slightly more tolerant (though still not classed in the Tolerant Group as measured by the Attitude Scale) toward drug abuse than white students at the .20 level of significance. Consult Table X on page 63 for a presentation of Race, Attitude data. Again it must be pointed out that the consideration of minority students as more tolerant of drugs than white students does not mean they are tolerant of drug use. Eighty four percent of the black students scored either Intolerant or Highly Intolerant. Likewise, 84 percent of the Mexican-American respondents
TABLE X
RACE COMPARED TO ATTITUDE TOWARD DRUG ABUSE

<table>
<thead>
<tr>
<th>Race</th>
<th>Highly Tolerant</th>
<th>Tolerant</th>
<th>Intermediate</th>
<th>Intolerant</th>
<th>Highly Intolerant</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>. . . .</td>
<td>. . . .</td>
<td>10.29</td>
<td>69.14</td>
<td>20.58</td>
<td>100</td>
</tr>
<tr>
<td>Black</td>
<td>. . . .</td>
<td>. . . .</td>
<td>16.0</td>
<td>72.0</td>
<td>12.0</td>
<td>100</td>
</tr>
<tr>
<td>Mex.-Amer.</td>
<td>. . . .</td>
<td>. . . .</td>
<td>16.0</td>
<td>64.0</td>
<td>20.0</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>n=243</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>n= 25</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>n= 25</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\( x^2 = 9.8130, \ df = 6, \ p < .20 \)

had scores in either the Intolerant or Highly Intolerant categories.

Knowledge Level Compared to Attitude

Hypothesis 4 was studied in an attempt to gain more understanding of the complex association between drug knowledge and attitudes toward drug abuse. With the contemporary emphasis on drug education as a deterrent to the illegal use of drugs, it would be beneficial to have a clearer concept of the relationship between drug knowledge level and drug abuse attitude. This hypothesis proposed that respondents showing high levels of correct drug knowledge would display more tolerant attitudes toward drugs than would respondents with low levels of correct drug knowledge. Examination of the data gathered in this study does not support Hypothesis 4. Instead, higher levels of drug knowledge are associated
weakly with intolerance toward drugs \((x^2 = 9.0355, \text{ df } = 6, p < .20)\). Table XI presents an analysis of these data.

**TABLE XI**

**KNOWLEDGE LEVEL COMPARED TO ATTITUDE TOWARD DRUG ABUSE OF TOTAL SAMPLE**

<table>
<thead>
<tr>
<th>Knowledge Level</th>
<th>Highly Tolerant</th>
<th>Tolerant</th>
<th>Intermediate</th>
<th>Intolerant</th>
<th>Highly Intolerant</th>
<th>Sample Percent, (n)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Low</td>
<td>. . .</td>
<td>. .</td>
<td>. . .</td>
<td>.68</td>
<td>.34</td>
<td>1.02</td>
</tr>
<tr>
<td>Low</td>
<td>. . .</td>
<td>4.42</td>
<td>18.71</td>
<td>4.08</td>
<td>27.21</td>
<td>n= 3</td>
</tr>
<tr>
<td>Intermediate</td>
<td>. . .</td>
<td>6.46</td>
<td>42.18</td>
<td>12.59</td>
<td>61.23</td>
<td>n=80</td>
</tr>
<tr>
<td>High</td>
<td>. . .</td>
<td>.68</td>
<td>7.14</td>
<td>2.72</td>
<td>10.54</td>
<td>n=31</td>
</tr>
</tbody>
</table>

\(x^2 = 9.0355, \text{ df } = 6, p < .20\)  
N=294

Of the sample, the largest number of respondents (42.18 percent) were found to display Intermediate knowledge and Intolerant attitude. Only .34 percent of the sample were both Very Low in knowledge level and Highly Intolerant of drugs. Low knowledge respondents who were Highly Intolerant composed 4.08 percent of the sample; 12.59 percent were scored as having Intermediate knowledge and as being Highly Intolerant. Two and seventy-two hundredth's percent of the children were classified as both High in knowledge and Highly Intolerant of drug abuse. Two students of the 31 who scored High in knowledge, one of whom is the student
who made the highest individual knowledge score, are classed as Intermediate in attitude. In each knowledge level the percent of students in the Intolerant category is approximately the same. Hypothesis 4 is not supported and an examination of the raw data indicates the weak correlation that exists is in the opposite direction from that predicted.

Acquaintance With Drug Users

By testing Hypothesis 5 it was hoped that the results of this research could provide additional information on the influence that acquaintances have on children's attitudes toward drug abuse. The hypothesis stated that respondents acquainted with one or more drug users would display more tolerant attitudes toward drugs than would respondents who know no drug users.

Response to Item 28 of the questionnaire was utilized to examine Hypothesis 5.

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

One hundred ten students, 37.4 percent of the sample, answered that they knew no persons who had used illegal drugs. One hundred eighty-four students said that they did know one or more drug users. From among the total sample, 34 percent said they knew one or two users; 10.9
percent indicated they knew three or four; 4.4 percent admitted knowing five to ten drug users; and 13.3 percent claimed to know eleven or more users. The number of users known and attitudes toward drug abuse were compared. Though the correlation is not strong, the results indicate that children who know one or more actual users of illegal drugs manifest slightly more tolerance toward drugs than do the children who know no drug users \((x^2 = 12.6845, \text{ df } = 8, p < .20)\). Table XII gives an analysis of these data.

**TABLE XII**

**ACQUAINTANCE WITH DRUG USERS OF ANY AGE COMPARED TO ATTITUDE TOWARD DRUG ABUSE**

<table>
<thead>
<tr>
<th>Number of Users Known</th>
<th>Number of Students in Parentheses</th>
<th>Attitude Categories by Percent and Number of Students in Parentheses</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Highly Tolerant</td>
</tr>
<tr>
<td>None</td>
<td></td>
<td>9.09 (10)</td>
</tr>
<tr>
<td>One or more</td>
<td></td>
<td>13.05 (24)</td>
</tr>
</tbody>
</table>

\(x^2 = 12.6845, \text{ df } = 8, p < .20\)

It had been thought that acquaintance with drug users would indicate a tolerant attitude toward drugs. These children who know drug users are a little more tolerant than children who have no acquaintance with users but they are by no means tolerant of the use of drugs. Of the 184 students who said they knew one or more drug users, 86.95 percent scored in
either the Intolerant or Highly Intolerant categories. With this explanation in mind, Hypothesis 5 is mildly supported by the data received on item 28 from this sample of fifth and sixth grade children.

Item 29 of the questionnaire was also used to measure acquaintance with drug users. This question was more explicit and asked only of acquaintance with users the same age as this sample of students.

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

Earlier in this chapter, page 57, acquaintance with drug users who were the same age as the respondents was found to be slightly correlated with high drug knowledge levels \( (x^2 = 15.8387, df = 12, p < .20) \). However, when responses about acquaintance with users the age of the students was compared with attitudes toward drug use no statistically significant relationship was indicated \( (x^2 = 9.91, df = 8, p < .30) \). Seventy percent of the sample replied that they knew no drug users their own age. The 30 percent who knew peer users of drugs scored neither more tolerantly nor intolerantly than did the 70 percent with no acquaintance with drug users of fifth and sixth grade ages. These findings give no support to Hypothesis 5. In a sample as
negative toward drug abuse as is this sample, variables that show any statistical correlation with tolerance or intolerance must produce scores solidly in the Intermediate category or the Highly Intolerant category. On Item 28, 68.7 percent of this sample of children score simply as Intolerant. On Item 29, 68.6 percent score as Intolerant.

In a strict interpretation of the data, particularly the responses to Item 28, Hypothesis 5 has some support in that students knowing drug users display slightly more tolerant attitudes toward drug abuse.

Effect of Church Affiliation on Drug Knowledge Level

The sixth hypothesis with which this study was concerned maintained that affiliation with a church would be related positively to high, correct drug knowledge levels. It was supposed that students associated with some of the religious bodies listed would possess more accurate information about drugs than would students affiliated with other of the churches. Only 257 children in the sample listed a church affiliation; 24 children responded they were not affiliated with a church; 2 students left the question blank; and 5 responses were illegible. In testing Hypothesis 6, affiliation with 12 different religious faiths was compared with drug knowledge levels. No significant correlation existed between the variables ($x^2 = 216.5854, df = 224, p < .75$). Students' drug knowledge levels appear to be quite
unrelated to association with any particular church. Table XIII gives the data concerning church affiliation and knowledge level.

### TABLE XIII

CHURCH AFFILIATION AND KNOWLEDGE LEVEL

<table>
<thead>
<tr>
<th>Church Affiliation</th>
<th>Number of Students per Level in Parentheses</th>
<th>Knowledge level by Percent and Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Very Low</td>
<td>Low</td>
</tr>
<tr>
<td>None Listed</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marked &quot;None&quot;</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baptist</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Methodist</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Presbyterian</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lutheran</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Christian</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Church of Christ</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seventh Day Adventist</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Catholic</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jehovah's Witnesses</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pentecostal Nazarene</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unitarian</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mormon</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Illegible</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\[ \chi^2 = 216.5854, \text{ df } = 224, \ p < .75, \ C = .6513 \]
It also seems apparent that whether or not students were even associated with a church produced no significant differences in drug knowledge levels. When the responses of the 257 children who admitted religious affiliation and the replies of the 37 who either said they had no church, failed to respond, or responded illegibly were compared with drug knowledge levels the results showed no significant correlation ($x^2 = 1.7768$, df = 3, $p < .70$). This comparison is represented in Table XIV.

**TABLE XIV**

CHURCH AFFILIATION AND NO CHURCH AFFILIATION COMPARED WITH KNOWLEDGE LEVELS

<table>
<thead>
<tr>
<th>Church Affiliation</th>
<th>Number of Students per Knowledge Level</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Very Low</td>
<td>Low</td>
</tr>
<tr>
<td>No</td>
<td>…</td>
<td>10</td>
</tr>
<tr>
<td>Yes</td>
<td>3</td>
<td>70</td>
</tr>
</tbody>
</table>

$\chi^2 = 1.7768$, df = 3, $p < .70$  

$N=294$

These findings offer no support for Hypothesis 6 which held that church affiliation would relate positively to correct drug knowledge levels of elementary schoolchildren. And this conclusion is in agreement with the apparent ineffectiveness of teaching by a minister compared with drug knowledge levels as discussed earlier in this chapter, pages 55-57 ($x^2 = 29.2524$, df = 32, $p < .50$).
But when frequency of church attendance was compared with drug knowledge levels a very significant correlation was evident between the two variables ($x^2 = 102.3446$, df = 80, $p < .05$). Where nominal church association has no import as far as drug knowledge is concerned, frequent and regular attendance to religious services appears conducive of accurate drug knowledge. This relationship exists even while church affiliation and the minister's teaching as a source of drug knowledge hold no positive association with correct drug knowledge.

In this sample of children, Hypothesis 6 as worded is not supported. But it must be noted that the children from families which are active in churches are significantly more accurately informed about drugs.

Effect of Church Affiliation on Drug Abuse Attitudes

Hypothesis 7 led to the comparison of the church affiliation of the children with their attitudes toward drug abuse. With various churches sometimes holding distinct dogmas and participating in different rituals, it seemed reasonable that the socialization of children from some religious groups might result in a more intolerant view of drug abuse than the view of children from other religious groups. A comparison of church affiliation and drug abuse attitudes was made. For the children of this sample, which it must be remembered is a sample very negative toward the use of drugs, there was a significant
correlation between religious affiliation and intolerance of drugs ($x^2 = 37.8131$, $df = 28$, $p < .10$). Table XV presents data concerning church affiliation and drug abuse attitudes.

**Table XV**

**CHURCH AFFILIATION AND ATTITUDE TOWARD DRUG ABUSE**

<table>
<thead>
<tr>
<th>Church Affiliation</th>
<th>Attitude Score by Percent</th>
<th>Number of Students per Category in Parentheses</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Highly Tolerant</td>
<td>Tolerant</td>
</tr>
<tr>
<td>None listed</td>
<td>37.5 (3)</td>
<td>50.0 (4)</td>
</tr>
<tr>
<td>Marked &quot;None&quot;</td>
<td>16.7 (4)</td>
<td>54.2 (13)</td>
</tr>
<tr>
<td>Baptist</td>
<td>7.8 (7)</td>
<td>81.1 (73)</td>
</tr>
<tr>
<td>Methodist</td>
<td>5.9 (1)</td>
<td>58.8 (10)</td>
</tr>
<tr>
<td>Presbyterian</td>
<td></td>
<td>100.0 (2)</td>
</tr>
<tr>
<td>Lutheran</td>
<td></td>
<td>66.7 (2)</td>
</tr>
<tr>
<td>Christian</td>
<td></td>
<td>100.0 (3)</td>
</tr>
<tr>
<td>Church of Christ</td>
<td>5.0 (1)</td>
<td>70.0 (14)</td>
</tr>
<tr>
<td>Seventh Day Adventist</td>
<td>17.4 (12)</td>
<td>52.2 (36)</td>
</tr>
<tr>
<td>Catholic</td>
<td>7.1 (1)</td>
<td>78.6 (11)</td>
</tr>
<tr>
<td>Jehovah's Witnesses</td>
<td></td>
<td>100.0 (2)</td>
</tr>
<tr>
<td>Pentecostal-Nazarene</td>
<td>7.4 (2)</td>
<td>77.8 (21)</td>
</tr>
<tr>
<td>Unitarian</td>
<td>25.0 (2)</td>
<td>75.0 (6)</td>
</tr>
<tr>
<td>Mormon</td>
<td></td>
<td>50.0 (1)</td>
</tr>
<tr>
<td>Illegible</td>
<td>20.0 (1)</td>
<td>80.0 (4)</td>
</tr>
</tbody>
</table>

$x^2 = 37.8131$, $df = 28$, $p < .10$, $C = .3376$

N=294
It would seem that a correlation of this strength, the .10 level of significance, for this sample of largely intolerant children is of particular meaning. Children from some religious bodies are more intolerant of drugs. An examination of Table XV shows that students from several of the churches scored in the Highly Intolerant category. The churches with the highest percentages include: Mormon, 50 percent; Methodist, 35.3 percent; Seventh Day Adventist, 30.4 percent; and 20 percent for the Church of Christ. Baptist, Catholic, and Pentecostal-Nazarene students also scored Highly Intolerant but the percentages of each of these was less than 20. No students from the Presbyterian, the Christian, or the Jehovah's Witnesses churches scored as Highly Intolerant. It should be observed, also, that 29.22 percent of the children professing no religion scored Highly Intolerant.

These findings support Hypothesis 7 that church affiliation holds a positive relationship with intolerant drug abuse attitudes.

As churches in this society are assumed to be concerned with moral and ethical values, it was believed that children associated with churches would display more intolerant attitudes about drugs than would children who were not religiously oriented. When drug abuse attitudes were compared with whether or not a student was affiliated with a church, the results were significant to the .10 level of significance ($x^2 = 4.6547, df = 2, p < .10$). See Table XVI for an analysis of
these data.

TABLE XVI

CHURCH AFFILIATION AND NO CHURCH AFFILIATION COMPARED WITH DRUG ABUSE ATTITUDES

<table>
<thead>
<tr>
<th>Church Affiliation</th>
<th>Number of Students per Attitude Category</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Highly Tolerant</td>
</tr>
<tr>
<td>No</td>
<td>. . .</td>
</tr>
<tr>
<td>Yes</td>
<td>. . .</td>
</tr>
</tbody>
</table>

\[ x^2 = 4.6547, \text{ df } = 2, \text{ p } < .10 \]

Again it is felt that these findings, in view of the negativism of this sample of children, indicate that church affiliation is strongly correlated with intolerance of drugs. Hypothesis 7 is supported by the results of this study.

Other data are consistent with this interpretation. The responses on frequency of church attendance was significantly associated with intolerance of drug abuse at a level of similar strength, .10. A comparison of these variables indicates that the church-going families, as they habitually frequent religious services, influence the attitudes of their children toward intolerance of drug abuse \((x^2 = 16.2968, \text{ df } = 10, \text{ p } < .10)\).
CHAPTER V

CONCLUSIONS

Summary of Findings

The responses given by the tested sample of 294 fifth and sixth grade students, 90 living in an urban community combined with 204 living in two rural communities, were used to examine seven hypotheses. The results of this research permit the following assessments of validity of the hypotheses of this study:

1. Schoolchildren of an urban community will display higher levels of correct knowledge about drugs than will schoolchildren of two rural communities.
   This hypothesis was rejected.

2. Schoolchildren of an urban community will display more tolerant attitudes toward drugs than will respondents of two rural communities.
   This hypothesis was supported.

3. Racial minority group respondents will display more tolerant attitudes toward drugs than will white respondents.
   This hypothesis was supported.

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.
   This hypothesis was rejected.

5. Respondents acquainted with one or more drug users will display more tolerant attitudes toward drugs than will respondents who know no drug users.
   This hypothesis was supported.
6. Church affiliation will relate positively to correct drug knowledge levels of elementary school-children.
   This hypothesis was rejected.

7. Church affiliation will have a positive relationship with intolerant attitudes of schoolchildren toward drug abuse.
   This hypothesis was supported.

Discussion and Evaluation

It was necessary to reject Hypothesis 1 because the rural children of this sample clearly held more correct knowledge concerning drugs than did the Denton children. There was no significant difference, however, between the urban Denton students and the rural Keene students. But, in this study, the very high drug knowledge scores of the rural Alvarado students were combined with the scores of the Keene students and computed together. This necessitated the repudiation of Hypothesis 1 as faulty. Realizing the inadequacy of one variable, community of residence, when compared with knowledge levels, to lead to definitive answers, it seemed appropriate to compare other variables with drug knowledge levels. Of the variables which were available through the survey instrument and which were compared with knowledge levels, neither secondary associations, student perception of knowledge sources, teaching by church leaders, instruction by school teachers, nor the overt teaching by parents were significantly correlated with accurate drug knowledge. But frequency of church attendance was related to correct knowledge \((p < .05)\), parental disapproval of drugs was strongly
correlated with high knowledge ($p < .025$), and acquaintance with multiple drug users was slightly related to accurate knowledge scores ($p < .20$). A composite of the characteristics of a student with the best chance of having a high drug knowledge level would include having parents who plainly disapprove of drug abuse, being a part of a family which frequently and regularly goes to church, and having residence in Alvarado.

Hypothesis 2 was predicated on the assumption that higher drug knowledge levels, which were projected for urban children in Hypothesis 1, would be accompanied by greater tolerance toward the use of drugs. Urban students, supposedly more knowledgeable, would also be more tolerant. The urban students in the sample were more tolerant than the rural students ($p < .01$) but they were less informed. It has been stressed, however, that this computed tolerance does not represent actual tolerance of drugs because the entire sample of students manifests a wholeheartedly negative view of drug abuse. As with the first hypothesis, variables other than community of residence were compared with drug abuse attitudes. No statistically significant associations were found between attitudes about drugs and group memberships, sources of knowledge, number of grade school aged drug users known, teaching by a minister or instruction by school teachers. Parental interest in talking about drugs was significantly correlated with intolerance of drugs ($p < .05$); perceived
parental disapproval of drugs was mildly correlated with intolerance of drugs \((p < .20)\). The typical student of this sample with the highest intolerance toward drug use would likely live in Keene or Alvarado and have parents who talked freely about the problems of drugs and disapproved their use; his family would frequently and regularly attend church.

In this sample of students minority group identity had no relationship with drug knowledge levels; no differences of significance existed between the white students and the minority group students in correct drug information levels. Only slight differences were apparent \((p < .20)\) between the drug abuse attitudes of minority group children and white children. Although racial minority students were a little more tolerant of drugs than white students they cannot be labeled as really tolerant of drugs when 84 percent of them scored either as Intolerant or Highly Intolerant of drug abuse. The support of Hypothesis 3, though apparent, is nonetheless very mild.

The problem of knowing the relationship of knowledge to attitude is complex and needs to be studied in depth. The fourth hypothesis of this research, dealing with drug knowledge levels of children compared with their drug abuse attitudes, touches the total problem superficially, perhaps. But it can, nevertheless, contribute a little to what other researchers have set forth about the relationship of knowledge and attitude. Chein and Wiener in their studies of children's
drug knowledge and attitudes tested actual drug users almost exclusively. They found high correlations between high drug knowledge and tolerant drug abuse attitudes—the more correct the knowledge the more tolerant the attitude. But they were unable to affirm that correct knowledge caused the tolerance or that tolerance resulted in knowledge.

This research has surveyed pre-adolescent children who were not, as far as was known, users of illegal drugs. For the children of this sample, high levels of drug knowledge were not related to tolerant drug attitudes. Instead, high drug knowledge levels were associated, to a small degree \((p < .20)\), with intolerance of drugs. The sample was so negative toward drugs that most any measurable number of high knowledge scores would have resulted in some association. There is a possibility that this intolerance has little to do with formal instruction. Richardson, having studied attitudes of fifth grade students toward drugs, has suggested that the pre-adolescent typically reflects parental value systems. It may be that fifth and sixth grade students, still dependent on parents or other adults for guidance, maintain negative feelings for the unexplored. Perhaps they are intolerant of the unknown. The almost unanimous response to one item on the survey instrument of this research seems to illustrate the ostensible insecurity of these children toward the unknown and unexplored. The item read, "Marijuana
may cause damage we do not know about." Astonishingly, 282 children replied "yes."

If negative attitudes are generally reflective of parental values which children this age maintain in order to protect themselves from their own inexperience and timidity, these attitudes are held without reference, necessarily, to correct information. Perhaps for a society to expect public school teachers to present accurate information about drugs to this age children and simultaneously inculcate intolerance of drugs is to expect both the unnecessary and the impossible. It may be unnecessary because the children are already very negative in attitude; it may be impossible because there is little evidence that drug education correlates with intolerance of drugs. Drug education emphasis, as demonstrated by the scores of the children from Alvarado in this sample, does correlate strongly with correct drug knowledge levels but it appears to affect attitudes little. A great deal more study needs to be done before it can be safely assumed, as contemporary society blithely does, that the schools can solve social problems by presenting correct information.

Attitudes toward drug abuse were examined again in Hypothesis 5. It was thought that acquaintance with actual users of drugs would be associated with tolerance of drugs. Students who knew one or more drug users of any age did show slightly more tolerant attitudes about drugs than did the
children unacquainted with any drug users. But, as has so often been noted in this discussion, these students all are relatively intolerant.

Hypotheses 6 and 7 were concerned with the relationships of church affiliation when compared with drug knowledge levels and drug abuse attitudes. There were no meaningful differences in the knowledge levels of children affiliated with particular churches (p < .75), nor between children with religious orientation and those holding no church affiliation (p < .70). But, consistent with the negative views held by this sample of students, when church affiliation was compared with drug abuse attitudes there was a significant association between church affiliation and intolerance of drugs (p < .10). This level of significance is stronger than the .20 level which exists between intolerant attitudes toward drug abuse and knowledge levels but is much less than the .01 significance level correlation between intolerant attitudes and community of residence. Active church affiliation, as evidenced by frequency of attendance, was strongly correlated with high drug knowledge levels (p < .05) and less strongly associated with intolerance of drugs (p < .10). This interpretation of the value of religiosity is consistent with the conclusions of other researchers. Chein's studies found that non-heroin users tended to come from families who were regular church goers. Wellisch believes that frequency of church attendance identifies youngsters who do not use
drugs more often than it characterizes drug users. Canada's LeDain Commission views drug use as related to lack of religious values. It appears that attitudes of children are formed in the context of their primary relationship, the family. In some way not fully understood, parents who care deeply enough about the training of their children that they regularly attend a church, concomitantly instill attitudes toward drugs which are acceptable to the larger society and provide conditions for accurate learning. Chein has correctly observed that the deprivations of the young heroin users he studied were those of values and not material goods.

Analyses of the 1974 Study
And the 1971 Study

In completion of this research a comparison of the results with the findings of Nations' 1971 study is now possible. Both studies found that the schoolchildren of rural communities held more correct knowledge concerning drugs than did the urban children and at the same .10 level of significance. However, the 1974 study included children from Denton, Keene, and Alvarado in the sample; had the sample been composed only of Keene and Denton students, as was the 1971 sample, no meaningful correlation would have been evident between city of residence and high drug knowledge. It is beyond the scope of this study to state whether Keene children dropped in knowledge level or Denton children gained in knowledge level.
Both studies found that schoolchildren of an urban community displayed more tolerant attitudes toward drugs than did students of rural communities. But, where the findings of the 1971 study were very tentative, the correlation between community of residence and tolerance toward drugs in the 1974 study was very significant at the .01 level. The explanation of this disparity in degree of significance level is probably due to the strongly intolerant views of the Alvarado students in the 1974 sample.

The two studies agreed that racial minority group students displayed more tolerant attitudes toward drugs than did white respondents. However, this was true of the 1971 sample at a much more significant level ($p < .05$) than it was of the 1974 sample ($p < .20$). The fact that the 1974 sample was much more racially balanced probably accounts for the differences in levels of significance.

The studies also concur that high levels of correct drug knowledge are associated with intolerance of drug abuse. Again, however, there was a discrepancy in the degree of level of significance. The 1971 study found a correlation of .05 while the 1974 study showed a correlation of only .20. The 1974 sample scored higher on drug knowledge levels and also more intolerantly concerning drug use than did the 1971 sample. This explains the difference in degree of significance level but does not account for it. Perhaps the larger sample size contributed to the difference. Maybe the administration of the questionnaire by two very different individuals
is responsible for some variation. Possibly there has been a slight shift in the direction of the rejection of drug use in these communities.

The studies clashed in their findings about the influence of acquaintance with drug users on drug abuse attitudes. The 1971 study found no correlation between acquaintance with drug users and drug abuse attitudes ($p < .80$). The 1974 study showed a slight correlation between the number of acquaintances who were drug users and tolerance toward drugs ($p < .20$). Racial identity in the 1974 sample was correlated to the same level with tolerance, but it is not possible to equate the two variables. Perhaps the more tolerant students boasted a little in their answers as to the number of drug users known.

The most striking disagreements between the results of the two studies occurred when the relationships between church affiliation and drug knowledge levels and drug attitudes were examined. The most significant finding of the 1971 research was that church affiliation was positively correlated with correct drug knowledge levels ($p < .005$). The 1974 study, surprisingly, found no correlation of significance ($p < .75$) between drug knowledge and church affiliation. Why this is true is unknown. Perhaps some explanation of this difference is due to the nature of the samples. Because of the religious homogeneity of Keene, the 1971 sample did not contain the same ratio of church affiliation found in the
North Central Texas region as a whole. The 1974 sample, though still heavily weighted with Seventh Day Adventist affiliates, is closer to the ratio of church affiliation of the general population of the region. It is understood that these observations, if accurate, would only partially account for the wide differences.

In the same manner, the two studies came to conflicting conclusions when church affiliation was compared with drug abuse attitudes. The 1971 study saw no relationship of significance between church affiliation and attitudes toward drugs (p < .50). But in the 1974 study church affiliation was associated with intolerant attitudes towards drugs (p < .10). Besides the imbalance of the ratio of church affiliates just discussed, which would apply to this comparison also, the overwhelmingly negative views of the 1974 sample may explain this disparity of results in some measure.

In conclusion, for the optimist, there may be a few "straws in the wind" that a slight change has occurred regarding children and drugs in the communities tested. Both knowledge levels and intolerance appear to have increased. Racial minority group children scored essentially the same as white respondents on drug knowledge. Degree of tolerance toward drugs by racial minority group children decreased. Thoughtful, caring parents who themselves function adequately in the total society may perhaps have some assurance that they are transmitting their values to their children and without hurt to those children.
APPENDIX I

TO THE STUDENT:

The answers to these questions will be studied to discover an over-all 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 live

10. What clubs or groups, if any, are you a member of?
    (like Cub Scouts, Boy Scouts, Brownies, Girl Scouts, 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 people
   3. three or four people
   4. five to ten people
   5. more than ten or eleven people

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

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

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Highest Possible Score: 49
APPENDIX III

DRUG ABUSE EDUCATION
ALVARADO INTERMEDIATE SCHOOL

TIME SCHEDULES

Grade Four . . . Six Weeks - 30-45 min. a day, 3 days a week
Grade Five . . . Six Weeks - 60 min. or more a day, 3 days a week
Grade Six . . . Six Weeks - 60 min. or more a day, d days a week

The problem with our age level children in the intermediate grade is not so much one of marijuana, heroin, and hard narcotics, but one of teaching values, and one of producing mentally healthy and socially adjusted children.

The underlying concept in our drug program is one of responsibility to ourselves and to others. We must stress reason and awareness as opposed to punishment, fear, and morality. Positive and negative aspects must be stressed, but not dwelled upon. We want to produce behavioralistic change. Guidance of the child's emotional and social development is most important. The strongest deterrent to drug abuse in the child's future lies in his strength of character in his ability and determination to face life and enjoy it through the wholesome understanding and constructive use of his own resources.
**BROAD OBJECTIVE:**
Children understand that every substance taken into the body by any means enters into the complex functions of the body and affects its condition.

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<th>LEARNINGS</th>
<th>PUPIL EXPERIENCES</th>
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<td>Children learn that a substance taken into the body by injection affects its condition.</td>
<td>Poll the class to find out what vaccinations the students have had. (Many of the children may have traveled and have had many types of injections.)</td>
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<td>Discuss the various types of vaccinations and their corresponding illnesses.</td>
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<td>Let children make reports orally on some of these reference papers.</td>
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<td>Let the pupils do reference work on some of these diseases, the invention or discovery of vaccines, and how the vaccine combats the disease.</td>
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<td>Some students may do biographies on different scientists and their work on various vaccines, ie. Salk, Pasteur, etc.</td>
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<td>Use diagrams of the blood and stress a tracing of the vaccine as it enters the body and then attacks the troubled area.</td>
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Children learn that a substance taken into the body by smoking affects its condition.

Let pupils think through and discuss how they think smoking affects the body. List these ideas on the board. (These do not have to be accurate.)

Let the children do research work on smoking and how it affects the body. Suggest that they write for information.

Trace the passage of air through the nose to the lungs. Let the children make a list of the functions of the respiratory system.
BROAD OBJECTIVE: Children recognize that drugs are beneficial to themselves and to mankind when used properly.

LEARNINGS
Children learn what medicines are, from where they come and in what form.

PUPLI EXPERIENCES
Let the children begin making a scrapbook from articles in newspapers and periodicals concerning drugs, i.e., New Drugs to help mankind and also Drug Abuse. (Drug Advertisement might be included.)

Make a list of common household medicines.

Discuss uses for the drugs.

Make a class chart. Add information as reports are given.

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<td>Mentholatum</td>
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Select a committee of pupils to do reference work on such specifics as the following:

a) Man's early search in the world of nature for substances to relieve his ills

b) Drugs derived directly from natural sources and still in use today

c) The development of synthetic drugs and their importance in medicine today

d) Special drugs and their importance to man, what form they take and where they came from

e) The growth of the drug industry in recent years

Bring labels from some common antiseptics for class to discuss.

Display and label drawing or photographs of various kinds of pills, use a tray with a few prescription bottles.
Children learn the difference between prescription and non-prescription drugs.

Children learn that some medicines should be prescribed.

Children become aware of the proper storage of household drugs.

Invite a parent or friend who is a doctor to visit the class to discuss medicine (drugs) and their uses or Tape an interview with a doctor discussing important drugs which are used for combating common diseases.

Let children give impromptu talks on an experience of an illness or injury and the effect of a drug.

Make a list of non-prescription and prescription drugs you might have in the medicine chest.

 Invite a pharmacist to visit the class and explain the use of prescription and non-prescription drugs.

Discuss why certain drugs need a doctor's prescription. Continue the discussion by indicating how drugs can harm a person if not properly used.

Let children discuss and role play: Select two pupils to dramatize a situation in which a person with a bottle of pills offers one of them to a friend who is complaining of a minor ailment. The friend refuses to take it and then describes the dangers of accepting pills from any unauthorized individual.

Let pupils draw up some tentative suggestions as to the proper handling of medicines and medications which are kept in their homes.

When the pupils have done this, have them review their lists of suggestions with their parents and report the results to the class.

Let the pupils make posters as class projects to portray the proper storage of drugs.

Have children write stories about having to take a prescribed drug.

Have children write a description of a person they feel is mentally healthy; one who is physically healthy.
**BROAD OBJECTIVE:** Children recognize that non-food substances are potentially damaging to the body and should be used only under special circumstances and with extreme care.

<table>
<thead>
<tr>
<th>LEARNINGS</th>
<th>PUPIL EXPERIENCES</th>
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<tbody>
<tr>
<td>Children describe substances that are potentially damaging to the body which are found in and around their homes.</td>
<td>Let the children make a list and discuss household substances which are potentially harmful to the human body.</td>
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<td></td>
<td>Have the pupils ask their parents to make a list with them of substances harmful to the human body, such as detergents, insect poisons, etc.</td>
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<td>Let the children make a display exhibit of dangerous household substances and describe their use in class.</td>
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<td>Invite a chemistry or biology teacher to talk to the class about the nature of dangerous household chemicals and the precautions that should be observed in their use.</td>
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<td>Have the pupils read the labels and determine which substance might make it dangerous.</td>
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<td>Let the pupils design labels which might be placed on containers as warnings.</td>
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</tbody>
</table>
**BROAD OBJECTIVE:** Children recognize that drugs can be harmful to themselves and mankind when used improperly—especially narcotics.

**LEARNINGS**

Children learn to recognize common drugs they are most likely to come in contact with and the dangers which they can produce.

**PUPIL EXPERIENCES**

Discuss information the students already know about: stimulants, depressants, hallucinogenic drugs. They may want to make a chart.

**Drug** Form Effect Use Abuse
Amphetamine Tablet Stimulant Dieting pep pills

They could start a notebook which they would continually add to.

Children may wish to role play situations which show drugs being used properly and improperly.

**AMPHETAMINES**

**Medical Uses**
1. Narcolepsy (attacks of sleep)
2. Depression
3. Weight control

**Abuse**
1. Excitability (tremor of hands)
2. Talkativeness
3. Enlarged pupils
4. Restlessness
5. Heavy perspiration
6. Sleeplessness

**Abuse can cause:**
1. High blood pressure
2. Abnormal heart rhythms
3. Heart Attacks
4. Suicidal attempts

**BARBITURATES**

**Medical Uses**
1. High Blood Pressure
2. Epilepsy
3. Insomnia
4. Diagnosis and treatment of mental illness
5. Relax patients before and after surgery

**Abuse**
1. Slurred speech
2. Staggering
3. Loss of balance and falling
4. Quick temper
5. A quarrelsome disposition
6. Coma
Abuse can cause:
1. Insomnia
2. Nausea
3. Convulsions
4. Exhaustion
5. Mental confusion

MARIJUANA

MARIJUANA - mild "hallucinogen"

Medical uses (Mostly Asia and Africa)
1. Relieve pain during surgery
2. Used in India as medicine
3. Used in religious ceremonies or as a native medicine.

Abuse
1. Ataxia (inability to coordinate movements
2. Lowering amounts of glucose in blood
3. Lowering of over-all body temperature
4. Increased appetite and desire for sweets
5. Inflammation of mucous membranes

Abuse can cause:
1. Hilarity
2. Carelessness
3. Distortion of sensation and perception
4. Irritability and confusion

Bulletin boards could be made from information gleaned from students.

LSD

LSD - a hallucinogenic drug
d-Lysergic acid diethylamide

Medical Use - tested as a possible treatment for mental and emotional illnesses

Abuse
1. Hallucinations
2. Panic
3. Distortion and intensification of color
4. Impulses towards suicidal acts
5. Psychosis

Abuse can cause:
1. Dilated pupils
2. Nausea
3. Increase in blood pressure, heart rate, and blood sugar.
BROAD OBJECTIVE: Children gain experience in the whole realm of decision making through group discussion, student involvement, games, TV commercials.

LEARNINGS
Children learn that they are always making decisions and learn some principles for decision making.

PUPIL EXPERIENCES
Let the children make a list of the decisions that they have made during the past twenty-four hours. Then have the class discuss some of these. Have them decide which of these were wise choices and which were not and WHY?

Let the children discuss and compile a list of principles which help them in decision making.

Six basic steps in the decision making processes might be:
1. Identify the problem
2. Establishing plans for study and action
3. Collecting and interpreting information
4. Reaching a tentative conclusion
5. Taking action
6. Evaluating action (living with your decision)

The pupils may wish to organize committees responsible for informing the class about some of the drug-promotional efforts that are carried on in the world. The committee might do the following:
1. make a bulletin board display of drug advertisements
2. make a tape recording of drug advertisements on TV
3. discuss the meaning of various slogans
4. list suggestive types of advertising

The pupils may wish to write limericks on the comical side of drug advertisements.

Through class discussions help the pupils to realize that the important decisions of life are the ones they are making right now.

Make a vocabulary list of words used in advertising.

Classify "good versus bad" advertisements heard on TV, radio, and read in newspapers.
September 25, 1974

Mrs. Callie Mickey
Box 7993 North Texas Station
Denton, Texas 76203

Dear Mrs. Mickey:

In answer to your September 7, 1974 letter I am reporting the following statistics:

Four Arrests
   Filed on two
   One convicted
   Charges pending on one

The above statistics are taken from our records from September 1973 to September 1974 for violations of dangerous drug and narcotics laws.

Sincerely,

Leroy Black
Chief of Police
CITY OF KEENE

LB/bb
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