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SENATE COMMITTEE REPORT

FURTHER

3/8/89

DATE TURNED INTO OFFICE 3/16/89

Mr. President:

Finance Committee considered SB 18

marijuana; efd

and recommended

- replace with _____ CS _____) same title
- or adopt _____ CS SB 18 (ind)) new title
- attached amendment(s) and technical title change (HB only)
- _____ letter of intent adopted

do pass

do not pass

no recommendation

individual recommendations

further referral to _____

7 FN's coming

- FISCAL NOTE(S) zero fiscal impact appropriation no FN
- new updated previous
- same as previous fiscal note(s) published _____

MEMBERS SIGNING DO PASS

[Handwritten signatures]

OTHER RECOMMENDATIONS

Chairman signature and recommendation

Committee Backup attached

[Handwritten signature]

CO-CHAIR

DR. DANCE

STATE OF ALASKA
1989 LEGISLATIVE SESSION

BILL VERSION: CS SB 18 (Judiciary)

PUBLISH DATE: _____

FISCAL NOTE

REQUEST: _____

REVISION DATE: _____
TITLE: An Act relating to
marijuana

AGENCY: Department of Law
BRU: Prosecution

SPONSOR: Fischer, Faiks, et al
REQUESTOR: Senate Finance

COMPONENTS: Third & Fourth Districts,
Crim Justice Litigation, Crim Appeals

EXPENDITURES/REVENUES: (THOUSANDS OF DOLLARS)

OPERATING	FY 89	FY 90	FY 91	FY 92	FY 93	FY-94
PERS. SERVICES	0	0	0	0	0	0
TRAVEL	0	0	0	0	0	0
CONTRACTUAL	0	0	0	0	0	0
SUPPLIES	0	0	0	0	0	0
EQUIPMENT	0	0	0	0	0	0
LAND/BUILD.	0	0	0	0	0	0
GRANTS/CLAIMS	0	0	0	0	0	0
MISCELLANEOUS	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0
CAPITAL	0	0	0	0	0	0
REVENUE	0	0	0	0	0	0

FUNDING: (THOUSANDS OF DOLLARS)

GENERAL FUNDS	0	0	0	0	0	0
FEDERAL FUNDS	0	0	0	0	0	0
OTHER	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0

POSITIONS:

FULL-TIME	0	0	0	0	0	0
PART-TIME	0	0	0	0	0	0
TEMPORARY	0	0	0	0	0	0

ANALYSIS: It is the intent of the Senate Finance Committee that the department may request a supplemental appropriation if it is necessary to fund the costs of defending the law recriminalizing marijuana.

PREPARED BY: 
SENATOR RICK UEHLING, CO-CHAIRMAN
SENATE FINANCE COMMITTEE

DATE: March 16, 1989
PHONE NO.: 465-4821

STATE OF ALASKA
1989 LEGISLATIVE SESSION

BILL VERSION: CS SB 18 (Judiciary)
PUBLISH DATE: _____

FISCAL NOTE

REQUEST: _____

REVISION DATE: _____
TITLE: An Act relating to
marijuana

AGENCY: Department of Administration
BRU: Public Defender Agency

SPONSOR: Fischer, Faiks, et al
REQUESTOR: Senate Finance

COMPONENTS: Third & Fourth Judicial
Districts

EXPENDITURES/REVENUES: (THOUSANDS OF DOLLARS)

OPERATING	FY 89	FY 90	FY 91	FY 92	FY 93	FY 94
PERS. SERVICES	0	0	0	0	0	0
TRAVEL	0	0	0	0	0	0
CONTRACTUAL	0	0	0	0	0	0
SUPPLIES	0	0	0	0	0	0
EQUIPMENT	0	0	0	0	0	0
LAND/BUILD.	0	0	0	0	0	0
GRANTS/CLAIMS	0	0	0	0	0	0
MISCELLANEOUS	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0
CAPITAL	0	0	0	0	0	0
REVENUE	0	0	0	0	0	0

FUNDING: (THOUSANDS OF DOLLARS)

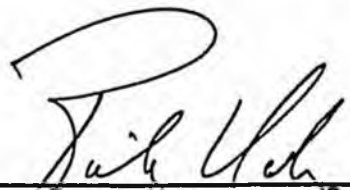
GENERAL FUNDS	0	0	0	0	0	0
FEDERAL FUNDS	0	0	0	0	0	0
OTHER	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0

POSITIONS:

FULL-TIME	0	0	0	0	0	0
PART-TIME	0	0	0	0	0	0
TEMPORARY	0	0	0	0	0	0

ANALYSIS:

PREPARED BY:


SENATOR RICK UEHLING, CO-CHAIRMAN
SENATE FINANCE COMMITTEE

DATE: March 16, 1989
PHONE No.: 465-4821

STATE OF ALASKA
1989 LEGISLATIVE SESSION

BILL VERSION: CS SB 18 (Judiciary)
PUBLISH DATE: _____

FISCAL NOTE

REQUEST: _____

REVISION DATE: _____
TITLE: An Act relating to
marijuana

AGENCY: Department of Administration
BRU: Office of Public Advocacy

SPONSOR: Fischer, Faiks, et al
REQUESTOR: Senate Finance

COMPONENTS: _____

EXPENDITURES/REVENUES: (THOUSANDS OF DOLLARS)

OPERATING	FY 89	FY 90	FY 91	FY 92	FY 93	FY 94
PERS. SERVICES	0	0	0	0	0	0
TRAVEL	0	0	0	0	0	0
CONTRACTUAL	0	0	0	0	0	0
SUPPLIES	0	0	0	0	0	0
EQUIPMENT	0	0	0	0	0	0
LAND/BUILD.	0	0	0	0	0	0
GRANTS/CLAIMS	0	0	0	0	0	0
MISCELLANEOUS	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0
CAPITAL	0	0	0	0	0	0
REVENUE	0	0	0	0	0	0

FUNDING: (THOUSANDS OF DOLLARS)

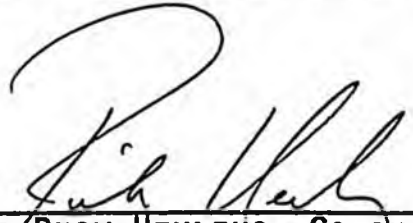
GENERAL FUNDS	0	0	0	0	0	0
FEDERAL FUNDS	0	0	0	0	0	0
OTHER	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0

POSITIONS:

FULL-TIME	0	0	0	0	0	0
PART-TIME	0	0	0	0	0	0
TEMPORARY	0	0	0	0	0	0

ANALYSIS:

PREPARED BY:


 SENATOR RICK UEHLING, CO-CHAIRMAN
 SENATE FINANCE COMMITTEE

DATE: March 16, 1989
PHONE NO.: 465-4821

STATE OF ALASKA
1989 LEGISLATIVE SESSION

BILL VERSION: CS SB 18 (Judiciary)

PUBLISH DATE: _____

FISCAL NOTE

REQUEST: _____

REVISION DATE: _____
TITLE: An Act relating to
marijuana

AGENCY: Dept/Health & Social Services
BRU: Alcohol & Drug Abuse Services

SPONSOR: Fischer, Faiks, et al
REQUESTOR: Senate Finance

COMPONENTS: Administration

EXPENDITURES/REVENUES: (THOUSANDS OF DOLLARS)

	FY 89	FY 90	FY 91	FY 92	FY 93	FY 94
OPERATING						
PERS. SERVICES	0	0	0	0	0	0
TRAVEL	0	0	0	0	0	0
CONTRACTUAL	0	0	0	0	0	0
SUPPLIES	0	0	0	0	0	0
EQUIPMENT	0	0	0	0	0	0
LAND/BUILD.	0	0	0	0	0	0
GRANTS/CLAIMS	0	0	0	0	0	0
MISCELLANEOUS	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0
CAPITAL	0	0	0	0	0	0
REVENUE	0	0	0	0	0	0

FUNDING: (THOUSANDS OF DOLLARS)

GENERAL FUNDS	0	0	0	0	0	0
FEDERAL FUNDS	0	0	0	0	0	0
OTHER	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0

POSITIONS:

FULL-TIME	0	0	0	0	0	0
PART-TIME	0	0	0	0	0	0
TEMPORARY	0	0	0	0	0	0

ANALYSIS:

PREPARED BY:


SENATOR RICK UEHLING, CO-CHAIRMAN
SENATE FINANCE COMMITTEE

DATE: March 16, 1989
PHONE NO.: 465-4821

STATE OF ALASKA
1989 LEGISLATIVE SESSION

BILL VERSION: CS SB 18 (Judiciary)

PUBLISH DATE: _____

FISCAL NOTE

REQUEST: _____

REVISION DATE: _____
TITLE: An Act relating to
marijuana

AGENCY: Department of Public Safety
BRU: Alaska State Troopers

SPONSOR: Fischer, Faiks, et al
REQUESTOR: Senate Finance

COMPONENTS: Detachments, CIB & VPSO

EXPENDITURES/REVENUES: (THOUSANDS OF DOLLARS)

OPERATING	FY 89	FY 90	FY 91	FY 92	FY 93	FY 94
PERS. SERVICES	0	0	0	0	0	0
TRAVEL	0	0	0	0	0	0
CONTRACTUAL	0	0	0	0	0	0
SUPPLIES	0	0	0	0	0	0
EQUIPMENT	0	0	0	0	0	0
LAND/BUILD.	0	0	0	0	0	0
GRANTS/CLAIMS	0	0	0	0	0	0
MISCELLANEOUS	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0
CAPITAL	0	0	0	0	0	0
REVENUE	0	0	0	0	0	0

FUNDING: (THOUSANDS OF DOLLARS)

GENERAL FUNDS	0	0	0	0	0	0
FEDERAL FUNDS	0	0	0	0	0	0
OTHER	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0

POSITIONS:

FULL-TIME	0	0	0	0	0	0
PART-TIME	0	0	0	0	0	0
TEMPORARY	0	0	0	0	0	0

ANALYSIS:

PREPARED BY: _____


SENATOR/RICK UEHLING, CO-CHAIRMAN
SENATE FINANCE COMMITTEE

DATE: March 16, 1989
PHONE No.: 465-4821

STATE OF ALASKA
1989 LEGISLATIVE SESSION

BILL VERSION: CS SB 18 (Judiciary)
PUBLISH DATE: _____

FISCAL NOTE

REQUEST: _____

REVISION DATE: _____
TITLE: An Act relating to
marijuana

AGENCY: Alaska Court System
BRU: Trial Courts

SPONSOR: Fischer, Faiks, et al
REQUESTOR: Senate Finance

COMPONENTS: _____

EXPENDITURES/REVENUES: (THOUSANDS OF DOLLARS)

OPERATING	FY 89	FY 90	FY 91	FY 92	FY 93	FY 94
PERS. SERVICES	0	0	0	0	0	0
TRAVEL	0	0	0	0	0	0
CONTRACTUAL	0	0	0	0	0	0
SUPPLIES	0	0	0	0	0	0
EQUIPMENT	0	0	0	0	0	0
LAND/BUILD.	0	0	0	0	0	0
GRANTS/CLAIMS	0	0	0	0	0	0
MISCELLANEOUS	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0
CAPITAL	0	0	0	0	0	0
REVENUE	0	0	0	0	0	0

FUNDING: (THOUSANDS OF DOLLARS)

GENERAL FUNDS	0	0	0	0	0	0
FEDERAL FUNDS	0	0	0	0	0	0
OTHER	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0

POSITIONS:

FULL-TIME	0	0	0	0	0	0
PART-TIME	0	0	0	0	0	0
TEMPORARY	0	0	0	0	0	0

ANALYSIS:

PREPARED BY: 
SENATOR RICK UEHLING, CO-CHAIRMAN
SENATE FINANCE COMMITTEE

DATE: March 16, 1989
PHONE NO.: 465-4821

STATE OF ALASKA
1989 LEGISLATIVE SESSION

BILL VERSION: CS SB 18 (Judiciary)

PUBLISH DATE: _____

FISCAL NOTE

REQUEST: _____

REVISION DATE: _____
TITLE: An Act relating to
marijuana

AGENCY: Department of Corrections
BRU: _____

SPONSOR: Fischer, Faiks, et al
REQUESTOR: Senate Finance

COMPONENTS: _____

EXPENDITURES/REVENUES: (THOUSANDS OF DOLLARS)

OPERATING	FY 89	FY 90	FY 91	FY 92	FY 93	FY 94
PERS. SERVICES	0	0	0	0	0	0
TRAVEL	0	0	0	0	0	0
CONTRACTUAL	0	0	0	0	0	0
SUPPLIES	0	0	0	0	0	0
EQUIPMENT	0	0	0	0	0	0
LAND/BUILD.	0	0	0	0	0	0
GRANTS/CLAIMS	0	0	0	0	0	0
MISCELLANEOUS	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0
CAPITAL	0	0	0	0	0	0
REVENUE	0	0	0	0	0	0

FUNDING: (THOUSANDS OF DOLLARS)

GENERAL FUNDS	0	0	0	0	0	0
FEDERAL FUNDS	0	0	0	0	0	0
OTHER	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0

POSITIONS:

FULL-TIME	0	0	0	0	0	0
PART-TIME	0	0	0	0	0	0
TEMPORARY	0	0	0	0	0	0

ANALYSIS:

PREPARED BY:


SENATOR RICK UEHLING, CO-CHAIRMAN
SENATE FINANCE COMMITTEE

DATE: March 16, 1989
PHONE No.: 465-4821

Original sponsors: Fischer, Faiks,
Kelly, et al.

1 IN THE SENATE BY THE JUDICIARY COMMITTEE

2 CS FOR SENATE BILL NO. 18 (Judiciary)

3 IN THE LEGISLATURE OF THE STATE OF ALASKA

4 SIXTEENTH LEGISLATURE - FIRST SESSION

5 A BILL

6 For an Act entitled: "An Act making the possession of less than eight
7 ounces of marijuana a class B misdemeanor and making
8 specific findings that constitute a legitimate and
9 compelling state interest to prohibit the possession
10 of less than eight ounces of marijuana; and providing
11 for an effective date."

12 BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

13 * Section 1. FINDINGS. The legislature finds that marijuana use is a
14 health problem for the reasons set out in this section. Many of the rea-
15 sons are based on new information obtained since 1975. Each of the follow-
16 ing constitutes a legitimate and compelling state interest:

17 (1) Marijuana and other cannabis preparations contain more than
18 420 different compounds, including 60 cannabinoids that have mind-altering
19 properties.

20 (2) Marijuana induces biochemical alterations in the central
21 nervous system that result in the five characteristics that identify addic-
22 tive, dependence producing drugs: primary pleasurable reward, reversible
23 neuropsychological impairment, abstinence syndrome, tolerance, and self-
24 administration.

25 (3) The breakdown products or metabolites of marijuana are fat
26 and lipid soluble and may remain in the body for extended time periods.

27 (4) The tetrahydrocannabinol (THC) content of street samples of
28 marijuana generally has increased in potency from approximately one to two
29 percent in marijuana obtainable 10 years ago to as high or higher than 5 to

1 10 percent in marijuana obtainable in 1989.

2 (5) Recent research has yielded findings that demonstrate that
3 marijuana may have a detrimental effect on

4 (A) respiratory and cardiovascular systems, in that

5 (i) sinusitis, pharyngitis, bronchitis, and emphysema
6 may be associated with chronic marijuana use;

7 (ii) habitual marijuana smoking may produce precancer-
8 ous change in the lung;

9 (iii) during a marijuana "high," the user may experience
10 tachycardia as the heart rate increases to as much as 130 - 150
11 beats a minute;

12 (B) reproductive systems, in that

13 (i) marijuana affects the network of glands and hor-
14 mones that are involved in reproduction;

15 (ii) a pregnant woman who uses marijuana takes an
16 increased risk that the chemical compounds in the marijuana will
17 pass across the placenta to the developing fetus;

18 (C) the brain, in that

19 (i) THC may accumulate in brain cell membranes;

20 (ii) marijuana and its metabolites may alter neuro-
21 chemicals and their receptor sites;

22 (iii) use of marijuana may impair visual tracking and
23 depth perception and may reduce coordination, reaction time, and
24 vigilance, making it dangerous to drive, fly, or operate machin-
25 ery;

26 (iv) chronic marijuana use, particularly by adoles-
27 cents, may interfere with reading comprehension, verbal and
28 mathematical problem solving, perception of time and distance,
29 short term memory, and the ability to concentrate, and reduce

1 motivation;

2 (v) the psychological effects of marijuana use may
3 include anxiety, panic, paranoia, psychosis, illusions, and
4 hallucinations, and some studies link marijuana to schizophrenia;
5 and

6 (D) the body's immune system, in that marijuana use

7 (i) may depress the immune system and alter the funda-
8 mental cellular defenses against disease; and

9 (ii) may reduce the chromosomes in T-lymphocyte cells.

10 (6) There is a common perception by youth and others that the
11 current Alaska Statutes "legalize" marijuana, and this misperception has a
12 social effect that is detrimental to the public health and welfare in that
13 it encourages drug use.

14 * Sec. 2. AS 11.71.060(a) is amended to read:

15 (a) Except as authorized in AS 17.30, a person commits the crime
16 of misconduct involving a controlled substance in the sixth degree if
17 the person

18 (1) uses or displays any amount of a schedule VIA con-
19 trolled substance;

20 (2) [OR] possesses one or more preparations, compounds,
21 mixtures, or substances of an aggregate weight of less than one-half
22 pound [ONE OUNCE OR MORE] containing a schedule VIA controlled sub-
23 stance [ON A PUBLIC STREET OR SIDEWALK OR ON THE PREMISES OF A PUBLIC
24 CARRIER OR BUSINESS ESTABLISHMENT OR IN ANY OTHER PUBLIC PLACE]; or

25 (3) [(2) KNOWINGLY POSSESSES ANY AMOUNT OF A SCHEDULE VIA
26 CONTROLLED SUBSTANCE WITHIN THE IMMEDIATE CONTROL OF THAT PERSON WHILE
27 OPERATING A PROPELLED VEHICLE;

28 (3) BEING UNDER 19 YEARS OF AGE, POSSESSES ONE OR MORE
29 PREPARATIONS, COMPOUNDS, MIXTURES, OR SUBSTANCES OF AN AGGREGATE

1 WEIGHT OF LESS THAN FOUR OUNCES CONTAINING A SCHEDULE VIA CONTROLLED
2 SUBSTANCE;

3 (4) POSSESSES ONE OR MORE PREPARATIONS, COMPOUNDS, MIX-
4 TURES, OR SUBSTANCES OF AN AGGREGATE WEIGHT OF FOUR OUNCES OR MORE
5 CONTAINING A SCHEDULE VIA CONTROLLED SUBSTANCE; OR

6 (5)] refuses entry into a premises for an inspection au-
7 thorized under AS 17.30.

8 * Sec. 3. AS 12.45.155(a) is amended to read:

9 (a) In a prosecution under AS 11.71.010 - 11.71.060 [AS 11.-
10 71.010 - 11.71.070], a complete copy of an official laboratory report
11 from the Department of Public Safety or a laboratory operated by
12 another law enforcement agency is prima facie evidence of the content,
13 identity, and weight of a controlled substance. The report must be
14 signed by the person performing the analysis and must state that the
15 substance which is the basis of the alleged offense has been weighed
16 and analyzed. In the report, the author shall state with specificity
17 findings as to the content, weight, and identity of the substance.

18 * Sec. 4. AS 17.30.080(b) is amended to read:

19 (b) A person who violates (a) of this section, or who otherwise
20 manufactures, distributes, dispenses, or conducts research with a
21 controlled substance in the state without fully complying with 21
22 U.S.C. 811 - 830 (Controlled Substances Act), and regulations adopted
23 under those sections, is guilty of misconduct involving a controlled
24 substance under AS 11.71.010 - 11.71.060 [AS 11.71.010 - 11.71.070] in
25 the degree appropriate to the circumstances as described in those
26 sections.

27 * Sec. 5. AS 11.71.070 is repealed.

28 * Sec. 6. This Act takes effect immediately under AS 01.10.070(c).

CS FOR SENATE BILL NO. 18 (Judiciary)

"An Act making the possession of less than eight ounces of marijuana a class B misdemeanor and making specific findings that constitute a legitimate and compelling state interest to prohibit the possession of less than eight ounces of marijuana; and providing for an effective date."

SENATE FINANCE COMMITTEE Action:

March 16, 1989 - Reported out with seven zero fiscal notes

FISCAL NOTES:

Fiscal notes for the original bill and the CS (Jud) were the same.

A - Dept of Law	259.1
B - Dept of Administration (Public Defender)	173.7
C - Dept of Administration (Public Advocacy)	172.3
D - Dept of Health & Social Services	-0-
E - Dept of Public Safety	-0-
F - Court System	34.5
G - Dept of Corrections	108.0

(Fiscal note G was presented to the Committee for the first time at the March 16 meeting by Bill Parker.)

The Committee zeroed all fiscal notes because it was felt that, since it is already illegal to possess marijuana in public, there would be no new expenses incurred. The Committee felt it was doubtful there would be any arrests for private possession -- no cases to prosecute, no inmates to incarcerate -- in FY 90. However, should the departments incur expenses, they could make a supplemental appropriation request before the Legislature next year. The Committee took a wait-and-see attitude.

STATE OF ALASKA
THE LEGISLATURE

POUCH Y - STATE CAPITOL
JUNEAU, ALASKA 99811
907-465-3800

LEGISLATIVE AFFAIRS AGENCY

MEMORANDUM

January 12, 1989

SUBJECT: House Bill 22 -- sectional analysis
TO: Representative Alyce Hanley
FROM: Jack Chenoweth
Legislative Counsel

This bill "criminalizes" the possession of small amounts (less than eight ounces) of marijuana, making that possession a class B misdemeanor.

The draft combines a "Findings" statement prepared at your direction, and substantive provisions that duplicate what was introduced in 1987 as Senate Bill 32. I have added two sections, appearing as bill sections 3 and 4, as technical amendments made to conform existing laws to the changes proposed in the substantive sections.

Background:

The following information may be useful.

Under a 1968 revision of the drug laws and until amended in 1975, possession of marijuana for personal use was a criminal offense that carried a penalty of up to one year in jail and a fine of not more than \$1,000.

The criminal code classifies marijuana as a schedule VIA controlled substance, the only substance within that classification. Under current law,

-- possession of eight ounces or more of marijuana anywhere constitutes misconduct involving a controlled substance in the fifth degree, and is defined as a class A misdemeanor, AS 11.71.050(a)(3); for the violation of a class A misdemeanor, one may be imprisoned for up to one year and be fined not more than \$5,000;

-- possession of four ounces or more of marijuana constitutes misconduct involving a controlled substance in

the sixth degree, and is defined as a class B misdemeanor, AS 11.71.060(a)(4); for the violation of a class B misdemeanor, one may be imprisoned for up to 90 days and be fined not more than \$1,000;

-- possession in a public place of one ounce or more of marijuana but less than four ounces also constitutes misconduct involving a controlled substance in the sixth degree, AS 11.71.060(a)(1), a class B misdemeanor.

Also, under current law, possession of less than one ounce in a public place is a violation. AS 11.71.070. A "violation" is an offense that is not criminal. For conviction of a violation, no jail sentence may be imposed. See AS 11.81.900(a)(56). A fine may be imposed. While, generally, the maximum fine for a violation may not exceed \$300, AS 12.55.035(b)(5), under current law applicable to possession of small amounts of marijuana, the fine may not exceed \$100. AS 11.71.070(b).

Based in part on a state Supreme Court decision, Ravin v. State, 537 P.2d 494 (Alaska, 1975), possession of less than four ounces of marijuana other than in a public place is not currently defined as a criminal offense. In other words, no provision defines as criminal possession of less than four ounces if that possession occurs other than in a public place.

Principal provisions of this bill:

Sections 2 and 5 are the operative provisions of the legislation.

As drafted, bill section 2 principally affects "simple" possession. It makes a possession of up to eight ounces, or one-half pound, of schedule VIA controlled substance a class B misdemeanor. (As earlier noted, possession of eight ounces or more is, and would remain, a class A misdemeanor.) At the same time, as to other current marijuana possession provisions, this bill repeals one paragraph, paragraph (2), that defines possession within a propelled vehicle, and two other paragraphs, paragraphs (3) and (4), that eliminate distinctions on possession by persons under 19 years of age, and by persons possessing four or more ounces.

If enacted, the effect of the changes made by bill section 2 would be to make simple possession of less than one-half

Representative Alyce Hanley
Page 3
January 12, 1989

pound by anyone, in any location, subject to the criminal penalty. No distinction would remain as to possession in a propelled vehicle, and, of course, a distinction based on possession of four or more ounces or less than four ounces would no longer be necessary.

By way of enforcement, if a law enforcement officer finds evidence of possession, the person in possession may be criminally charged.

Bill section 5 repeals AS 11.71.070(a), misconduct involving a controlled substance in the seventh degree, a section that addresses possession of very small amounts of marijuana for sale or in public places. These situations or circumstances are addressed in AS 11.71.060, as revised by bill section 2.

*

The operative provisions are, as I've noted, based on last legislature's SB 32. When drafted and offered in late 1986 for introduction in the 1987 session, the draft of SB 32 was accompanied by a memorandum that said:

The accompanying bill draft was prepared in response to your request for a draft patterned after [the 14th Legislature's] SB 163. This draft makes the possession of any amount of marijuana illegal. The proposed amendment to AS 11.71.060(a) specifically concerns possession of any amount less than one-half pound and makes it a misdemeanor.

This provision conflicts with the right to privacy under art. 1, sec. 22 of the Alaska Constitution. In the case of Ravin v. State, 537 P.2d 494 (Alaska, 1975), the Alaska Supreme Court ruled that this right to privacy within the home prevailed over an inadequately compelling governmental interest in preventing marijuana possession and use by adults in the home. The policy arguments made in the bill are not, in my opinion, sufficiently weighty to overcome the constitutional protection recognized in the Ravin decision.

Substantively, all that is different between the 1987 bill draft and the one that accompanies this memorandum is the "Findings" provision, bill section 1.

The changes made are significant. The changes are based upon an editing of the findings set out in the earlier ver-

Representative Alyce Hanley
Page 4
January 12, 1989

sion, together with addition of material based, in part, on testimony obtained by the House Health, Education, and Social Services Committee.

The question set out in the memo I prepared last year and that is quoted above, applicable to the 1987 version of this legislation, remains: Does the right to privacy in the home prevail over the governmental interest stated in the "Findings" section as revised in April and May of 1988, the basis of this bill draft?

Last session, speaking to the Senate-passed version, CSSB 32 (HESS), I wrote

In Ravin, the court acknowledged that the right of privacy is limited by the "legitimate needs of the State to protect the health and safety of its citizens." 537 P.2d 494 at 501. Responding to the evidence marshalled by the state in defense of its prosecution, the court determined that

. . . It appears that effects of marijuana on the individual are not serious enough to justify widespread concern, at least as compared with the far more dangerous effects of alcohol, barbiturates, and amphetamines. Moreover, the current patterns of use in the United States are not such as would warrant concern that in the future consumption patterns are likely to change.

Ravin, supra., at 509 - 510. The court did not close the door to debate or to the adoption of legislation that would survive constitutional scrutiny:

Research is continuing extensively. Scientific doubts persist, however, and that fact has significance for our application of the law. It is a long-standing rule of law that statutes designed to protect the public health will receive a liberal construction. . . . There is a presumption in favor of public health measures; when there is substantial doubt as to the safety of a given substance or situation for the public health, controls intended to obviate the danger will usually be upheld.

Ravin, supra., at 510. But, the court concluded:

. . . no adequate justification for the state's intrusion into the citizen's right to privacy by its prohibition of possession of marijuana by an adult for personal consumption in the home has been shown. The privacy of the individual's home cannot be breached absent a persuasive showing of a close and substantial relationship of the intrusion to a legitimate governmental interest. Here, mere scientific doubts will not suffice. The state must demonstrate a need based on proof that the public health or welfare will in fact suffer if the controls are not applied. [Emphasis added]

Ravin, supra. at 511.

In my handling of the drafting and related legal work that attaches to the privacy issue, I have tried to remind legislative committees that the court's decision in Ravin necessitates that the legislature needs to try to meet the burden placed on the state to "demonstrate a need based on proof that the public health or welfare will in fact suffer if [the proposed] controls are not applied." What is in balance is, as the court has said

. . . the general proposition that the authority of the state to exert control over the individual extends only to activities of the individual which affect others or the public at large as it relates to matters of public health or safety, or to provide for the general welfare. . . . The state cannot impose its own notions of morality, propriety, or fashion on individuals when the public has no legitimate interest in the affairs of those individuals. . . .

Ravin, supra., at 509.

In this legislation, then, the "findings" are quite important. Bill section 1 of each version purports to set out factual conclusions from which the legislature has decided to proceed to "recriminalize" marijuana. The content of these findings may well determine whether the legislation passes constitutional muster.

Other provisions:

Bill sections 3 and 4 are technical conforming amendments.

Representative Alyce Hanley
Page 6
January 12, 1989

The legislation is given an immediate effective date by bill section 6.

*

If the analysis prompts questions, please contact me.

JC:gc
WKG5/084

RECEIVED MAR 15 1989

Paul Kenniston
9170 Riverwood Drive
Juneau, Alaska 99801

Senator John Binkley
Pouch V
Juneau 99811

Dear Senator Binkley,

I want you to support Senate Bill 18 for the following reasons: (1) it recriminalizes marijuana; (2) it imposes tougher laws on users. I am fifteen, and I urge you, as co-chair, to bring this issue under consideration of the committee its in.

Sincerely,

Paul Kenniston

cc: Senate Finance Committee

RECEIVED MAR 15 1989

Paul Gerber
Mendenhall Loop C-0
Juneau, AK 99801

March 12, 1989

Pouch V
Juneau, AK 99811

Dear Senator Binkly:

I am an 18 year old student attending Community Christian High School. I would urge you to vote yes on Senate Bill 18, which would recriminalize Marijuana. Though I do not think this bill imposes a strong enough penalty on people who possess this drug, I think it is the best choice at present.

Sincerely,

Paul Gerber

cc: Senate Finance Committee

RECEIVED MAR 15 1989

Greg Brayton
4224 Ptarmigan St.
Juneau, AK 99801

Pouch V
Juneau, AK 99811

Dear Senators Binkley & Uehling,

I strongly urge you to support HB 18. The bill would make the possession of marijuana illegal. This is what the law should be anyway. I am a 15 year old high-school student, but since I have such strong convictions about the issue, I felt that it was my duty to inform you of my opinion.

As the co-chairs of the Senate Finance Committee please schedule this legislation for a hearing.

Sincerely,
Greg Brayton

cc: Senate Finance Committee

FEB 02 1989

BILL NO: SB 18

DATE: February 2, 1989

TITLE: "An Act relating to marijuana; and providing for an effective date."

CONTACT: Gayle A. Horetski
Deputy Commissioner
465-4322

DEPARTMENT OF PUBLIC SAFETY

This bill makes possession of any amount of marijuana (less than one-half pound) in any place a class B misdemeanor offense. A class B misdemeanor carries a maximum penalty of 90 days in jail and a \$1,000 fine.

The limited resources and staffing level of the Alaska State Troopers drug enforcement units requires that these officers concentrate their enforcement efforts on drug suppliers and dealers, leaving little time to actively pursue those who merely possess small amounts of marijuana. Suppliers and dealers usually have substantial amounts of marijuana which are destined for sale in small amounts to individuals. It is more efficient to seize substantial amounts of the drug at its source than to seize small amounts from individuals.

Since possession of any amount of marijuana in public, on a school ground, by a minor, or while operating a motor vehicle is presently a crime, the trooper on routine patrol or working traffic enforcement has the power to arrest and charge when confronted with these situations.

Although passage of this legislation may well deter some people from possessing small amounts of marijuana in their homes (because it would be illegal), the enforcement efforts of the Alaska State Troopers would not change much from its present focus on suppliers and dealers. Passage of this legislation would bring Alaska's marijuana laws in line with federal laws and those in other states. Because of the Alaska Supreme Court's decision in Ravin v. State, 537 P. 2d 494 (1975), the new penalty provisions contained in this bill will almost certainly be subject to constitutional challenge, probably resulting in protracted litigation.

The Department of Public Safety is neutral on this legislation.



Arthur English
Commissioner

Page 1 of 13

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- | | <u>Voter I.D. #</u> | <u>Printed Name</u> | <u>Signature</u> |
|----|------------------------|---------------------|----------------------------|
| 1. | 949113 | Dorothy Ann Wright | <i>Dorothy Ann Wright</i> |
| | 306 Doe Field Dr. | Anchorage | 349-4962 |
| | <u>Address</u> | | <u>Telephone</u> |
| 2. | | Kathleen Kuorikoski | <i>Kathleen Kuorikoski</i> |
| | PO Box 90211 | 99509 | |
| | <u>Address</u> | | <u>Telephone</u> |
| 3. | | Sharon M. Rude | <i>Sharon M. Rude</i> |
| | 13421 Wimmerush Cir. | | 345-2857 |
| | <u>Address</u> | | <u>Telephone</u> |
| 4. | | Loretta Foster | <i>Loretta Foster</i> |
| | 4620 Golden Spring Cir | 99507 | 346-1565 |
| | <u>Address</u> | | <u>Telephone</u> |
| 5. | | LANA TRULLO | <i>Lana Trullo</i> |
| | 1701 Elcadmie #3 | 99507 | 344-1438 |
| | <u>Address</u> | | <u>Telephone</u> |
| 6. | | Carol Fuller | <i>Carol Fuller</i> |
| | 12810 Troy St. | Anch | 345-3411 |
| | <u>Address</u> | | <u>Telephone</u> |
| 7. | | ROBERT E. WEIMER | <i>Robert E. Weimer</i> |
| | 1620 WINTERSET DR | ANCH | 562-5647 |
| | <u>Address</u> | | <u>Telephone</u> |

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	<u>Voter I.D. #</u>	<u>Printed Name</u>	<u>Signature</u>
1.	729353	Nancy J. Beardsley	Nancy J. Beardsley
	13201 Reef Pt. Anch, AK 99515		345-4764
	<u>Address</u>		<u>Telephone</u>
2.	1409276	Linda K. Vost	Linda K. Vost
	13624 Venus Way Anch, AK 99515		345-5329
	<u>Address</u>		<u>Telephone</u>
3.	1442815	Marcia K. Hastings	Marcia K. Hastings
	7136 Condore Cir 99516		346-2524
	<u>Address</u>		<u>Telephone</u>
4.		Nancy O Hamilton	
	P.O. Box 99511		346-2524
	<u>Address</u>		<u>Telephone</u>
5.		Judy A. Houlahan	
	3431 Spinnaker Dr. 99516		345-0562
	<u>Address</u>		<u>Telephone</u>
6.		Robert Lee Kirtia	
	12831 Monterey Cir 99510		345-5016
	<u>Address</u>		<u>Telephone</u>
7.		Kevin Lee Tremblay	
	7850 Astor Dr. 99516		345-0720
	<u>Address</u>		<u>Telephone</u>

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- | | <u>Voter I.D. #</u> | <u>Printed Name</u> | <u>Signature</u> |
|----|----------------------|---------------------|------------------------------|
| 1. | | | |
| | | Dean E Nelson | <i>Dean E Nelson</i> |
| | 2621 W 69th | ANCH, AK 99502 | 248-1814 |
| | Address | | Telephone |
| 2. | 260103 | DAVID ONEILSON | <i>David Oneilson</i> |
| | 2621 W 69th | ANCHORAGE 99502 | 248-1814 |
| | Address | | Telephone |
| 3. | 311377 | LeeAnn Crumbley | <i>Lee Ann Crumbley</i> |
| | 630 Cedar Pt. Cir. | Anchorage, AK 99515 | 907-344-5175 |
| | Address | | Telephone |
| 4. | 367257 | ALICE RICHARDSON | <i>Mary Alice Richardson</i> |
| | 1521 Sunrise Dr. | Anchorage, 99508 | 277-5770 |
| | Address | | Telephone |
| 5. | | | |
| | 6740 | Anchorage, AK | 248-4418 |
| | Address | | Telephone |
| 6. | 850883 | Rhonda J. Schleren | <i>Rhonda Schleren</i> |
| | 2711 Cutwater Cir. | Anchorage 99516 | 345-7363 |
| | Address | | Telephone |
| 7. | | MARY CAROL WRIGHT | <i>Mary Carol Wright</i> |
| | 15650 Southpark Loop | Anchorage | 345-6432 |
| | Address | 99516 | Telephone |

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Voter I.D. #	Printed Name	Signature
1.	ANETTE C. SHOWALTER	<i>Anette C. Showalter</i>
	2320 TASHA DR., ANCHORAGE, 99503	348-3153
	Address	Telephone
2.	Patricia A. Jackson	<i>Patricia A. Jackson</i>
	15210 Pollock Dr. Anchorage, 99516	345-1434
	Address	Telephone
3.	Leslie Wiederholt	<i>Leslie W. Wiederholt</i>
	12831 Trent Circle	345-5979
	Address	Telephone
4.		
	Address	Telephone
5.		
	Address	Telephone
6.		
	Address	Telephone
7.		
	Address	Telephone

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- | | <u>Voter I.D. #</u> | <u>Printed Name</u> | <u>Signature</u> |
|----|---|---------------------|--------------------------|
| 1. | 367708 | Glenn H. Lundell | <i>Glenn H. Lundell</i> |
| | 3011 Brittany Place, Anchorage AK 99504 | | 333-0054 |
| | <u>Address</u> | | <u>Telephone</u> |
| 2. | 378268 | Christine Lundell | <i>Christine Lundell</i> |
| | 3011 Brittany Pl. Anchorage, AK 99504 | | 333-0054 |
| | <u>Address</u> | | <u>Telephone</u> |
| 3. | 413369 | JOHN J BENTZ | <i>John Bentz</i> |
| | P.O. Box 112663 Anchorage AK 99511 | | 345-6557 |
| | <u>Address</u> | | <u>Telephone</u> |
| 4. | 156255 | DOROTHY TONEY | <i>Dorothy Toney</i> |
| | 2502 Greenwood Dr 99517 | | 243-8402 |
| | <u>Address</u> | | <u>Telephone</u> |
| 5. | 452698 | MARTHA M. NELSON | <i>Martha M. Nelson</i> |
| | 12870 BEN CT ANCH. AK. 99515 | | 345-0007 |
| | <u>Address</u> | | <u>Telephone</u> |
| 6. | DAVID F. NELSON | | 345-0007 |
| | <u>Address</u> | | <u>Telephone</u> |
| 7. | 2382853 | Sheilahi Silva | <i>Sheilahi Silva</i> |
| | 3407 Dorbrandt St. Anch, AK. | | 565-3194 |
| | <u>Address</u> | | <u>Telephone</u> |

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- | | <u>Voter I.D. #</u> | <u>Printed Name</u> | <u>Signature</u> |
|----|---------------------------------------|---------------------|-------------------------|
| 1. | 113751 | EVA J REESE | <i>Eva Reese</i> |
| | 3602 21st St. Anch AK 99517 | | 243-5998 |
| | <u>Address</u> | | <u>Telephone</u> |
| 2. | 2166659 | | <i>Lefra Otnobruken</i> |
| | P.O. Box 110412 / 4901 Hillandale Dr. | | 345-0671 |
| | <u>Address</u> | | <u>Telephone</u> |
| 3. | 2166989 | | <i>[Signature]</i> |
| | P.O. Box 110412 / 4901 Hillandale Dr. | | 345-0671 |
| | <u>Address</u> | | <u>Telephone</u> |
| 4. | 04551586 | DARLENE NELSON | <i>Darlene Nelson</i> |
| | 2621 W 69th Ave. Anch 99502 | | 248-1814 |
| | <u>Address</u> | | <u>Telephone</u> |
| 5. | | Paul Rohwer | <i>Paul Rohwer</i> |
| | 10845 OUR RD Anch. AK | | 907 346 1655 |
| | <u>Address</u> | | <u>Telephone</u> |
| 6. | | Ellen Rohwer | <i>Ellen Rohwer</i> |
| | 10845 OUR RD Anch AK | | 907 346 1655 |
| | <u>Address</u> | | <u>Telephone</u> |
| 7. | | JERRY W KIZLEY | <i>Jerry W Kizley</i> |
| | 19811 Olympic Dr Anch AK 99515 | | 907-344-5850 |
| | <u>Address</u> | | <u>Telephone</u> |

183964

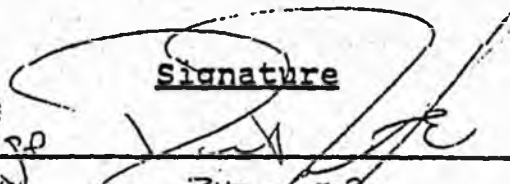
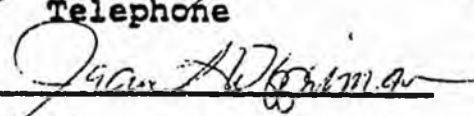
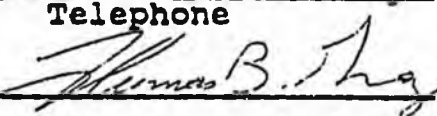
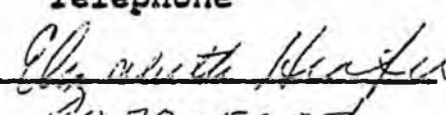

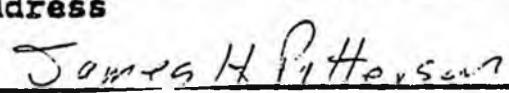
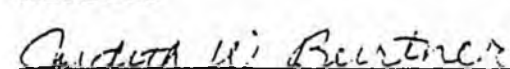
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- | | <u>Voter I.D. #</u> | <u>Printed Name</u> | <u>Signature</u> |
|----|--|---------------------|---|
| 1. | 1951994 | Rick Davison |  |
| | 3501 Admiralty Bay Anch. AK | 199515 | 349-7329 |
| | <u>Address</u> | | <u>Telephone</u> |
| 2. | 4197259 | Jean Wappaman |  |
| | 1284 Silver Springs Dr Anch 99516 | | 345-2455 |
| | <u>Address</u> | | <u>Telephone</u> |
| 3. | 4766771 | Thomas Gray |  |
| | 13131 BISCAYNE CIRCLE ANCHORAGE AK 99516 | | 345-1356 |
| | <u>Address</u> | | <u>Telephone</u> |
| 4. | | Elizabeth Heffer |  |
| | 1143 S H. Woodbury Ave AK | | 272-5257 |
| | <u>Address</u> | | <u>Telephone</u> |
| 5. | | Teresa Pelt |  |
| | 3500 La Touche # 260 99508 | | 562-2969 |
| | <u>Address</u> | | <u>Telephone</u> |
| 6. | | James H. Pitterson |  |
| | 3500 La Touche St | | 345-3215 |
| | <u>Address</u> | | <u>Telephone</u> |
| 7. | | Christa M. Burtner |  |
| | Green Hills PO Box 111041 | | 345-1598 |
| | <u>Address</u> | | <u>Telephone</u> |

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- | | <u>Voter I.D. #</u> | <u>Printed Name</u> | <u>Signature</u> |
|----|--|---------------------|----------------------------|
| 1. | 246312
2205 Boniface Pkwy #33 | Alice S Green | <i>Alice S. Green</i> |
| | <u>Address</u> | <u>Telephone</u> | 337-3084 |
| 2. | 771320 | Ernest Schlereth | <i>Ernest Schlereth</i> |
| | <u>Address</u> | <u>Telephone</u> | 345 7363
272 5549 |
| 3. | 3267011
4931 Omega Cir. | Margie Gilchrist | <i>Margie L. Gilchrist</i> |
| | <u>Address</u> | <u>Telephone</u> | 345-0641 |
| 4. | JOHN L. JAWAY
12802 BREEZE WOOD DR. | | |
| | <u>Address</u> | <u>Telephone</u> | 249-8402 |
| 5. | 4708759 DENISE WRIGHT
12102 Lilac Circle, Anch., AK 99516 | | <i>Denise Wright</i> |
| | <u>Address</u> | <u>Telephone</u> | (907) 345-8568 |
| 6. | 1152701 ROBERT A. WHITE
Box 112129 Anchorage AK 995117 | | <i>Robert Allen White</i> |
| | <u>Address</u> | <u>Telephone</u> | 345-3922 |
| 7. | <i>Maria M. Hill</i>
2308 Union St Anchorage 99507 | | |
| | <u>Address</u> | <u>Telephone</u> | 344-2424 |

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	<u>Voter I.D. #</u>	<u>Printed Name</u>	<u>Signature</u>
1.	1216996	Jean Higgins	Jean Higgins

	<u>Address</u>	<u>Telephone</u>
2.		

	DAVID J. LORAN	David J Loran
--	----------------	---------------

	12431 CLIPPERSHIP DR ANCHORAGE	345-3920
--	--------------------------------	----------

3.	780 Upper DeArmour	Elizabeth B. Hudson	345-6731
----	--------------------	---------------------	----------

	JOSEPH S. CALDARERA	349-1561
--	---------------------	----------

4.	5301 COUNTRY CLUB, ANCH. AK.	
----	------------------------------	--

	<u>Address</u>	<u>Telephone</u>
5.		

	<u>Address</u>	<u>Telephone</u>
6.		

	<u>Address</u>	<u>Telephone</u>
7.		

	<u>Address</u>	<u>Telephone</u>

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	<u>Voter I.D. #</u>	<u>Printed Name</u>	<u>Signature</u>
1.	2935416	M. Barbara Weiflick	<i>M. Barbara Weiflick</i>
	D.B. Box 113502, Anch. Alaska 99511		346-1481
	<u>Address</u>		<u>Telephone</u>
2.	639617	Kathleen K. Jackson	<i>Kathleen K. Jackson</i>
	12021 Forelands Circle, Anchorage, AK 99515		522-15201
	<u>Address</u>		<u>Telephone</u>
3.	15346	Lois E. KENNY	<i>Lois E. Kenny</i>
	3304 Greenland AA Anch. AK 99517		277-7352
	<u>Address</u>		<u>Telephone</u>
4.	293046	Jacqueline F. Jones	<i>Jacqueline F. Jones</i>
	P.O. Box 112604, Anchorage, AK 99511		345-1221
	<u>Address</u>		<u>Telephone</u>
5.	682825	Sandra M. Peck	<i>Sandra M. Peck</i>
	12305 Wilderness Anchorage AK 99516		345-3207
	<u>Address</u>		<u>Telephone</u>
6.	4121538	Gerald K. Van Kooten	<i>Gerald K. Van Kooten</i>
	4551 E 135 th Anch AK 99516		345-7900
	<u>Address</u>		<u>Telephone</u>
7.	7735 Port Orford	Marlene Taus	<i>Marlene Taus</i> 346 2403
	<u>Address</u>		<u>Telephone</u>

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	<u>Voter I.D. #</u>	<u>Printed Name</u>	<u>Signature</u>
1.	<u>1779866</u>	<u>MONA L. BRYANT</u>	<u>[Signature]</u>
	<u>1539 HARRIET CT. ANCH. AK. 99515</u>		<u>907-345-4344</u>
	<u>Address</u>		<u>Telephone</u>
2.	<u>55913</u>	<u>Jay R. Melville</u>	<u>[Signature]</u>
	<u>6641 Teslar Dr Anch 99509</u>		<u>907-349-1167</u>
	<u>Address</u>		<u>Telephone</u>
3.		<u>Judith L Melville</u>	<u>[Signature]</u>
	<u>6641 Teslar Dr Anch 99509</u>		<u>907-349-1167</u>
	<u>Address</u>		<u>Telephone</u>
4.		<u>ROBERT L. RICHMOND</u>	<u>[Signature]</u>
	<u>11200 SNOWLINE DRIVE</u>		<u>276-5727</u>
	<u>Address</u>		<u>Telephone</u>
5.	<u>571956</u>	<u>CAROL V. RICHMOND</u>	<u>[Signature]</u>
	<u>11200 Snowline Dr. Anch 99516</u>		<u>346-1246</u>
	<u>Address</u>		<u>Telephone</u>
6.	<u>421520</u>	<u>Sue A. Wise</u>	<u>[Signature]</u>
	<u>3140 Merganser Anch. 99516</u>		<u>349-1544</u>
	<u>Address</u>		<u>Telephone</u>
7.			
	<u>Address</u>		<u>Telephone</u>

*This page may be duplicated for additional sponsors.

Page 12 of 13

"Shall Alaska Statute 11.71.060(a) be amended to classify the use, display, or possession of any amount of marijuana up to one-half pound as a class B misdemeanor?"

WE, the undersigned, have read and support the above stated initiative. We are all qualified voters residing in the State of Alaska, and as sponsors, are committed to circulate the petition throughout the State in person and collect sufficient signatures to place the initiative on the next statewide election ballot.

- | | <u>Voter I.D. #</u> | <u>Printed Name</u> | <u>Signature</u> |
|----|-----------------------------|---------------------------------------|-----------------------------|
| 1. | 586949 | Carolyn Craft Ludwig | <i>Carolyn Craft Ludwig</i> |
| | | 10510 Lone Tree Drive 99516 | 346 3115 |
| | | Address | Telephone |
| 2. | FRANCES M. O'MEARA (930358) | Frances M. O'Meara | <i>Frances M. O'Meara</i> |
| | | 12440 Bainbridge Rd. 99516 | 345-4794 |
| | | Address | Telephone |
| 3. | CAROL A. FARREN (152768) | Carol A. Farren | <i>Carol A. Farren</i> |
| | | 12800 Ridgewood Rd Anchorage AK 99516 | 345-0786 |
| | | Address | Telephone |
| 4. | | | |
| | | Address | Telephone |
| 5. | | | |
| | | Address | Telephone |
| 6. | | | |
| | | Address | Telephone |
| 7. | | | |
| | | Address | Telephone |

*This page may be duplicated for additional sponsors.

Page 13 of 13

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- | | <u>Voter I.D. #</u> | <u>Printed Name</u> | <u>Signature</u> |
|----|---|---------------------|---------------------------|
| 1. | 3-3044217 | Brian E. Houlihan | <i>Brian E. Houlihan</i> |
| | <u>3-1955</u> | | |
| | <u>Address</u> | | <u>Telephone</u> |
| 2. | 3-1957956 | Cathleen T. Miller | <i>Cathleen T. Miller</i> |
| | <u>925 Coral Ln Anchorage 99515</u> | | <u>345-1844</u> |
| | <u>Address</u> | | <u>Telephone</u> |
| 3. | 01782663 | Pamela D. Eagle | <i>[Signature]</i> |
| | <u>Box 110152 Fairbanks, AK 99711</u> | | <u>344-0601</u> |
| | <u>Address</u> | | <u>Telephone</u> |
| 4. | | Steven D Gordon | <i>Steven D Gordon</i> |
| | <u>3820 Robin St Anchorage AK 99504</u> | | <u>333-9541</u> |
| | <u>Address</u> | | <u>Telephone</u> |
| 5. | | | |
| | <u>Address</u> | | <u>Telephone</u> |
| 6. | | | |
| | <u>Address</u> | | <u>Telephone</u> |
| 7. | | | |
| | <u>Address</u> | | <u>Telephone</u> |

*This page may be duplicated for additional sponsors.

2-18-88



Senator Paul A. Fischer
Alaska State Senate

RESOLUTIONS/STATEMENTS FOR RECRIMINALIZATION OF MARIJUANA

EDUCATION RELATED ORGANIZATIONS

Anchorage School District
Galena City School District
Galena School District Board of Education
Haines Borough School Board of Education
Juneau City and Borough School District
Juneau Douglas High School Student Council
Kanal Peninsula Borough School District
Kerny Lake High School
Ketchikan Gateway School District
Northwest Arctic Borough School District
Wrangell Junior and Senior High School
Alaska Parent Teacher Association
Association of Alaska School Boards
Alaska Association of Secondary School Principals
Alaska Association of School Governments/General Assembly
Alaska Association of School Governments/Student Leaders
Alaska Municipal League
Alaska State PTA Association

LAW AND RELATED ORGANIZATIONS

Anchorage Police Department
Alaska Peace Officers Association
Anchorage Crime Commission
Galena City Drug Task Force
Galena City Police Department
Juneau Police Department
Department of Public Safety
FBI National Academy Associates-Alaska Chapter
Wrangell Police Department
Alaskans for Drug Free Youth
Michael R. Spain/United States Attorney
Anchorage Crime Commission
Sitka Police Department
Alaska Association of Chiefs of Police

OTHER ORGANIZATIONS

Boys and Girls Clubs of America
Central Council (Tlingit and Haida Indian Tribes of Alaska)
Cook Inlet Council on Alcohol and Drug Abuse
Ketchikan Elks Lodge #1429
Ketchikan Rotary Club 200
Kiwanis Clubs of Anchorage
Valdez Rotary Club
Wrangell Junior and Senior High Schools
Rotary International
Ketchikan Soroptomists
Tongass Baptist Association/Southeast Alaska
Safa Homes-Juneau
Juneau Alliance of the Mentally Ill
Juneau Elks Lodge 420

MUNICIPALITIES

City and Borough of Juneau
Municipality of Anchorage
City of Ketchikan
City of Galena
Togiak City Council
City of Saxman
City of Valdez
City of Haines
City of Togiak
Northwest Arctic Borough Assembly
City and Borough of Sitka
City of Wrangell
Alaska Municipal League

CHAMBER OF COMMERCE

Anchorage Chamber of Commerce
Greater Sitka Chamber of Commerce
Juneau Chamber of Commerce

POLITICALLY RELATED

1986 Republican Party Convention Platform

JAN 11 1969



ALASKA ASSOCIATION OF ELEMENTARY SCHOOL PRINCIPALS
ALASKA ASSOCIATION OF SECONDARY SCHOOL PRINCIPALS
ALASKA ASSOCIATION OF SCHOOL ADMINISTRATORS

• ALASKA COUNCIL OF SCHOOL ADMINISTRATORS •
326 Fourth St., Suite 408 Juneau, Alaska 99801 586-9702

RESOLUTION FOR THE RECINDING OF LAW ALLOWING GROWTH AND POSSESSION OF MARIJUANA IN ALASKA

The Alaska Council of School Administrators urges the Legislature and Governor to pass legislation to recind the current law regarding marijuana.

RATIONAL:

- (A) The problem of drug and alcohol abuse by our society, particularly by children in our schools, is rising.
- (B) The President of the United States has asked for a national crusade to help solve this problem.
- (C) Many of the students using drugs, particularly marijuana, obtain it from homes where parents grow their own marijuana for personal use.
- (D) There is substantial proof that marijuana is harmful to health and safety of it's users.
- (E) There is a common perception by youth and others that the current Alaska Statutes "legalize" marijuana, and this misperception has a social effect that is detrimental to the public health and welfare in that it encourages drug use.
- (F) We have observed young people use marijuana and have had to deal first hand with it's effects to learning and behavior.

Alaska
MUNICIPAL
League

TELEPHONE
(907) 586-1373
FAX 463-5487

217 SECOND STREET, SUITE 200
JUNEAU, ALASKA 99801

6 February, 1989

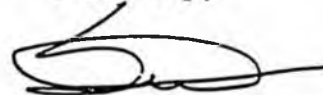
FEB 08 1989

Senator Paul Fischer
Alaska State Legislature
P.O. Box V
Juneau, Alaska 99811

Dear Senator Fischer,

As you requested in your letter of February 3, I have enclosed a copy of Alaska Municipal League Resolution #89-54, "A Resolution Supporting Repeal of AS 11.71.070 and Amendment of AS 11.71.060(a) to make Marijuana Illegal." In addition, I have included a letter and resolution from Mayor Gamble of Angoon on the same subject.

Sincerely,



Scott A. Burgess
Executive Director

Enclosure

Resolution of the Alaska Municipal League

Resolution No. 89-54

**A RESOLUTION SUPPORTING REPEAL
OF AS 11.71.070 AND AMENDMENT OF
AS 11.71.060(a) TO MAKE MARIJUANA ILLEGAL**

WHEREAS, the Alaska Municipal League recognizes the serious individual and public safety problems that exist in all communities in Alaska as a result of substance abuse (*AML Policy Statement: Part III, Public Safety; D. State Assistance*), and

WHEREAS, Alaska is the only state in the union with a permissive statute for personal possession of marijuana, and

WHEREAS, findings of local, state and federal authorities conclude that marijuana is detrimental to the health, welfare, and public safety of all people, and

WHEREAS, the Supreme Courts of other states and the U.S. Supreme Court have upheld state statutes prohibiting the use and possession of marijuana, and

WHEREAS, current Alaska state statutes are not in conformity with federal drug enforcement laws controlling drug abuse, and

WHEREAS, the conflict between federal and state law pertaining to marijuana causes unnecessary barriers for local police and Alaska State Troopers in protecting the public from drug abusers, and

WHEREAS, the Anchorage Crime Commission has for the past three years concluded that Alaska's permissive laws on marijuana should be repealed, and

WHEREAS, representatives of 60 Alaskan high schools at the Alaska Association of School Governments' Annual Fall Conference on October 18, 1986, unanimously passed a resolution to repeal the current marijuana law and make the drug in all its forms illegal in Alaska;

NOW, THEREFORE, BE IT RESOLVED that the Alaska Municipal League urges the Governor of the State of Alaska and the Alaska State



Alaskans for Drug-Free Youth

Revised - February 6, 1989

An Affiliate Member of the National Federation of Parents for Drug-Free Youth.

RESOLUTION IN SUPPORT OF SB18 & HB22 "An Act Relating to Marijuana..."

WHEREAS - Alaskans for Drug-Free Youth are concerned about the prevalent use of the drug marijuana by adults, as well as children.

WHEREAS - Adults may now possess up to 4 oz. of marijuana for their own personal use in their homes, even though in these homes may reside children. Studies show a correlation between adult use and child use.

WHEREAS - Research has demonstrated that marijuana usage is occurring more frequently in earlier age groups.

WHEREAS - The metabolites of marijuana are fat and lipid soluble and may remain in the body for extended periods of time.

WHEREAS - The THC content of street samples of marijuana generally have increased in potency from approximately less than one percent at the time of the Ravin Decision in 1975 to as high as 15.30 percent of samples taken from police-confiscated marijuana in Ketchikan during 1988. The Ravin Case in reference to higher potency levels in the future, states, "if such a shift were to occur, then marijuana use could be characterized as a serious health problem."

WHEREAS - Recent research has yielded findings that demonstrate that marijuana does, when used at least once a week, have a detrimental effect on respiratory and cardiovascular systems, on reproductive systems, on the brain, and on the body's immune system.

WHEREAS - Evidence strongly suggests that marijuana used regularly during pregnancy may result in infants with characteristics compatible with fetal alcohol syndrome.

WHEREAS - SB18 and HB22 address these health findings.

WHEREAS - The State of Alaska statutes pertaining to marijuana are not in conformity with National and International Laws.

WHEREAS - The Supreme Court of Alaska has stated that "no one has the right to do things in their own home which will affect others adversely." *

WHEREAS - The Supreme Court of Alaska further stated "when there is a substantial doubt as to the safety of a substance or situation of Public Health, controls to obviate the danger will usually be upheld."

THEREFORE - Be it resolved that Alaskans for Drug-Free Youth respectfully urge our public officials in the State Government including the legislature to make the possession of any amount of marijuana illegal by passing SB18 and HB22.

* Reference - Ravin Case 1975



P.O. BOX 189
ANGOON
ALASKA
99820

RECEIVED
FEB 06 1989
ALASKA MUNICIPAL LEAGUE
PHONE:
(907) 788-3653

February 1, 1989

Scott A. Burgess
Executive Director
Alaska Municipal League
217 Second Street, Suite 200
Juneau, Alaska 99801

Dear Mr. Burgess:

The Council of the City of Angoon reviewed and approved the enclosed resolution at a special meeting held on January 31, 1989.

The City of Angoon would appreciate your effort to share this information with other members of the A.M.L.

The joint Insurance plan and the directory are two valuable efforts to assist the outlying municipalities. Keep up the good work.

Sincerely,

Edward J. Gamble, Sr.
Mayor

Enclosed: (copy) Resolution 89-03



P.O. BOX 189
ANGOON
ALASKA
99820

PHONE:
(907) 788-3653

RESOLUTION NO. 89-03

WHEREAS, Angoon is a Second Class incorporated City under the State of Alaska, and

WHEREAS, laws that govern the State of Alaska directly impact the laws that govern the municipality of Angoon, and

WHEREAS, the law that allows the possession of any amount of marijuana has a negative impact with the Community of Angoon and the School System, and

WHEREAS, the City of Angoon has a strong position that people who are involved with the importation of illegal drugs should be dealt with in a criminal manner, and

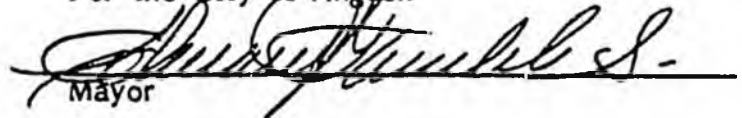
WHEREAS, the State of Alaska has the governing power to develop the laws that can assist the municipalities and School Districts to cope with the existing "drug problem" that appears to be growing annually;

NOW THEREFORE BE IT RESOLVED: That the Alaska State Legislature make it illegal to possess any amount of marijuana;

BE IT FURTHER RESOLVED: That any person involved in the trafficking of illegal drugs be charged with a criminal offense.

Passed at a City Council Meeting held on January 31, 1989 by a vote of 5 Yeas,
0 Nays, 2 Absent, 0 Abstain.

For the City of Angoon


Mayor

ATTEST: Arnthia S. Paul
City Clerk

SEAL



BRISTOL BAY AREA HEALTH CORPORATION

P.O. BOX 130 • DILLINGHAM, ALASKA 99576

(907) 842-5201 or (907) 842-5202

February 2, 1988

The Honorable Senator Fischer
Rm. 508, Capitol
P.O. Box V, Juneau 99811

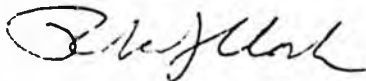
Dear Senator Fischer,

My Organization on behalf of the 32 villages in the Bristol Bay Area that we by Resolution are authorized to represent for all health matters, wants you to know that we fully support S.B. 18 "for the act relating to marijuana; and providing for an effective date".

You can count on our support and count on us as one of the many (we hope) in favor of your proposed bill, as well as H.B. 22.

Thank you and good luck.

Sincerely,

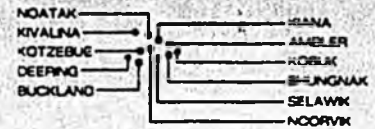


Robert Clark
Executive Director

cc: Jay Toth, C.O.O.
Christy Tilden, Alcohol Program
Executive Committee
Representative Jacko
Senator Zharoff

Northwest Arctic Borough School District
BOX 51
KOTZEBUE, ALASKA 99752
(907) 442-3472

FEB 13 1989



February 9, 1989

Senator Paul Fisher
Alaska State Senate
P.O. Box V
Juneau, AK 99811

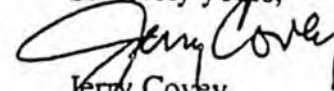
Dear Senator Fisher:

I have received your letter of February 3, 1989 concerning the re-criminalization of marijuana. During the last legislative session the district did support the re-criminalization of marijuana and resolution to that effect were sent to various legislative committees.

We are happy to hear that this legislation has been reintroduced this session and we will ask the board pass a resolution to support the re-criminalization of marijuana at our February meeting. After that meeting copies of the approved resolution will be forwarded to you and other committee chairpersons.

If you wish further information on the district's position on this matter please contact me at your convenience.

Sincerely yours,


Jerry Covey
Superintendent

TANANA CHIEFS CONFERENCE, INC.
Board of Directors
Resolution 88-74

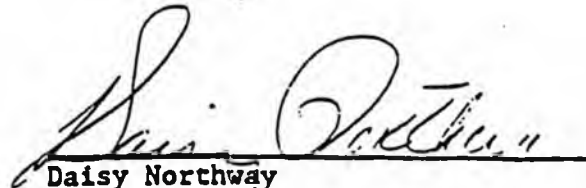
RECRIMINALIZATION OF MARIJUANA POSSESSION AND SALE
OF DRUG PARAPHERNALIA

- WHEREAS, the sale and public use of marijuana, and possession by minors are already illegal under Alaska State statutes; and,
- WHEREAS, possession and use of small amounts of marijuana in an individual's personal residence have been legal in Alaska since a 1975 Supreme Court ruling on privacy; and,
- WHEREAS, it has been clearly indicated that use of marijuana poses a hazard to the health of the individual user, increases the risk of accidental death and injury, and contributes to community crime and social problems; and,
- WHEREAS, the present legality of home possession of marijuana and sale of drug paraphernalia sends the wrong message to young people making critical choices about personal behavior;

NOW THEREFORE BE IT RESOLVED that the Tanana Chiefs Conference, Inc. Board of Directors hereby supports enactment of legislation by the State of Alaska reinstating the illegality of possession of any amount of marijuana at any time, and making the sale of drug paraphernalia illegal in Alaska.

CERTIFICATION

I hereby certify that this resolution was duly passed by the Tanana Chiefs Conference, Inc. Board of Directors on March 17, 1988 at Fairbanks, Alaska and a quorum was duly established.



Daisy Northway
Secretary-Treasurer
Tanana Chiefs Conference, Inc.

Submitted by: TCC Executive Board

accompanied by a small appropriation to DHSS to fund its planning and implementation. DHSS might be encouraged to use these funds to develop common district boundaries for all major DHSS grant programs.

MARIJUANA - Contact Persons: Mike Walleri, Lisa Jaeger,
Paul Sherry

The Tanana Chiefs Conference is opposed to liberal marijuana laws. The Conference feels that the present leniency of laws regarding home possession of marijuana and sale of drug paraphernalia sends the wrong message to young people making critical choices about personal behavior. If the laws regarding marijuana possession statewide cannot be tightened in the political arena, Tanana Chiefs villages have expressed an interest in more local control of marijuana in the villages. The matter of reinstating the illegality of possession of marijuana under state law could be addressed by individual communities through a local option election process similar to the local option law for possession of alcohol. The main issue is a problem of enforcement. When communities make the decision to ban possession of marijuana as a whole there is more resolve to cooperate with the decision. Enforcement costs are also community related.



City and Borough of Sitka

FEB 15 1989

304 LAKE STREET . SITKA, ALASKA . 99835

February 13, 1989

Senator Paul Fischer
Senate District D
P.O. Box V
Juneau, Alaska 99811

SUBJECT: Re-Criminalize Marijuana

Dear Senator Fischer:

At their regular meeting of January 30, 1989, the Assembly of the City and Borough of Sitka voted unanimously to support the re-criminalization of marijuana. The Assembly did not name a particular legislative bill for endorsement, however, they supported the re-criminalization of the use, display or possession of any amount of marijuana.

Sincerely,

John E. Dapcevich, Mayor
City and Borough of Sitka



CITY of WRANGELL, ALASKA

INCORPORATED JUNE 15, 1903

BOX 531, 99929 (907) 874-2381
FAX: (907) 874-3952

February 21, 1989

FEB 23 1989

Honorable Steve Cowper
Governor - State of Alaska
P. O. Box A
Juneau, Alaska 99811-0101

Dear Sir:

Enclosed is a copy of City of Wrangell Resolution No. 02-89-310 urging the Legislature to re-criminalize marijuana. The City Council supports House Bill No. 22 and Senate Bill No. 18 and urges passage without diluting the intent. The Federal, State and local governments have spent millions of dollars enforcing drug laws and providing medical assistance to drug users, including newborn babies that are addicted from their parent's drug use.

On behalf of the City Council, I urge you to support this legislation. We do not believe the message now given to our youth by the existing laws governing marijuana is the message we want to give.

Sincerely,

Fern Neimeyer
Mayor

FN/JR/fv

enclosure

cc: Senator Lloyd Jones
Representative Robin Taylor
Representative Cheri Davis
Senator Paul Fischer

CITY OF WRANGELL, ALASKA

RESOLUTION NO 02-89-310

A RESOLUTION OF THE COUNCIL OF THE CITY OF WRANGELL, ALASKA, URGING THE ALASKA LEGISLATURE TO CRIMINALIZE THE ACT OF POSSESSION OF MARIJUANA IN ANY AMOUNT.

WHEREAS, THC is the ingredient in marijuana that goes into the fatty tissues of the brain and other internal organs and takes thirty days to be eliminated from the body; and

WHEREAS, THC is reported to cause effects to a person that may result in the birth of deformed or undersized offspring; and

WHEREAS, the THC content of a marijuana cigarette is as high as ten percent today as compared to one percent ten years ago; and

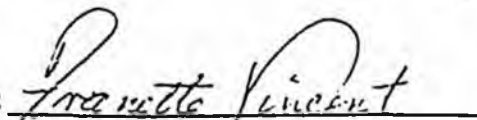
WHEREAS, numerous psychological and physical reactions result from the use of marijuana which impair the health and well being of the public; and

WHEREAS, Alaska's law which allows the possession of certain amounts of marijuana is contrary to the Federal Government's laws and the "war on drugs" being waged across the nation by Cities and States.

NOW, THEREFORE BE IT RESOLVED BY THE COUNCIL OF THE CITY OF WRANGELL, ALASKA, that the Alaska Legislature is urged to amend the law to criminalize the act of possession of marijuana in any amount in the best interests of the public, except as authorized in AS 17.301. Be it further resolved that copies of this Resolution be forwarded to Governor Steve Cowper, Senator Lloyd Jones, Representative Robin Taylor and Representative Cheri Davis.

PASSED AND APPROVED February 14, 1989


MAYOR

ATTEST: 
ACTING CITY CLERK

PULMONARY HAZARDS OF SMOKING MARIJUANA AS COMPARED WITH TOBACCO

TZU-CHIN WU, M.D., DONALD P. TASHKIN, M.D., BEHNAMEH DJAHED, M.D., AND JED E. ROSE, Ph.D.

Abstract To compare the pulmonary hazards of smoking marijuana and tobacco, we quantified the relative burden to the lung of insoluble particulates (tar) and carbon monoxide from the smoke of similar quantities of marijuana and tobacco. The 15 subjects, all men, had smoked both marijuana and tobacco habitually for at least five years. We measured each subject's blood carboxyhemoglobin level before and after smoking and the amount of tar inhaled and deposited in the respiratory tract from the smoke of single filter-tipped tobacco cigarettes (900 to 1200 mg) and marijuana cigarettes (741 to 985 mg) containing 0.004 percent or 1.24 percent Δ^9 -tetrahydrocannabinol.

As compared with smoking tobacco, smoking marijuana was associated with a nearly fivefold greater increment in the blood carboxyhemoglobin level, an approximate-

ly threefold increase in the amount of tar inhaled, and retention in the respiratory tract of one third more inhaled tar ($P < 0.001$). Significant differences were also noted in the dynamics of smoking marijuana and tobacco, among them an approximately two-thirds larger puff volume, a one-third greater depth of inhalation, and a fourfold longer breath-holding time with marijuana than with tobacco ($P < 0.01$). Smoking dynamics and the delivery of tar during marijuana smoking were only slightly influenced by the percentage of tetrahydrocannabinol.

We conclude that smoking marijuana, regardless of tetrahydrocannabinol content, results in a substantially greater respiratory burden of carbon monoxide and tar than smoking a similar quantity of tobacco. (*N Engl J Med* 1988; 318:347-51.)

WE have previously shown that the habitual smoking of 3 or 4 marijuana cigarettes a day is associated with the same frequency of the symptoms of acute and chronic bronchitis¹ and the same type and extent of epithelial damage in the central airways² as the regular smoking of more than 20 tobacco cigarettes a day. A possible explanation for these findings is that a greater quantity of smoke particulates and noxious gases is delivered to and deposited or absorbed in the lungs by marijuana than by a similar amount of tobacco, possibly as a result of differences in the way each type of cigarette is smoked. To investigate this possibility, we examined the dynamics of smoking a marijuana or a tobacco cigarette and measured the particulates delivered to the smoker's mouth during the smoking of a single cigarette of each type.

METHODS

We studied fifteen men who were habitual smokers (mean age \pm SD, 31.5 \pm 7.1 years), each of whom smoked both tobacco and marijuana. The subjects smoked an average of 29.9 \pm 16.7 tobacco cigarettes per day and had smoked an average of 16.1 \pm 12.2 pack-years of tobacco (one pack-year equals one pack of tobacco cigarettes per day times the number of years of smoking); they smoked an average of 16.5 \pm 17.1 marijuana cigarettes per week, and had smoked an average of 54.8 \pm 34.8 joint-years of marijuana (one joint-year equals one cigarette [joint] of marijuana per day times the number of years of smoking). All were in good general health and had normal or nearly normal values for forced vital capacity (101 \pm 8.7 percent of predicted values³) and forced expiratory volume in one second (96 \pm 14 percent of predicted values³). None reported intravenous drug abuse or smoking other illicit substances besides marijuana.

Each subject was studied on a single day after refraining from smoking tobacco for at least one hour and marijuana for at least six hours. During the study session, each subject smoked his own brand

of filter-tipped tobacco cigarette, followed, in single-blind fashion, first by a placebo marijuana cigarette (from which nearly all Δ^9 -tetrahydrocannabinol [Δ^9 -THC] had been extracted, so that the concentration was 0.004 percent) and next by a marijuana cigarette of similar weight containing 1.24 \pm 0.06 percent Δ^9 -THC. An interval of approximately 30 minutes separated the smoking of each two cigarettes. The tobacco cigarettes weighed 900 to 1120 mg and had a tar yield of 4.6 to 23.1 mg (mean, 12.0 \pm 5.7 mg) and a nicotine yield of 0.4 to 1.4 mg (mean, 0.84 \pm 0.32 mg) by Federal Trade Commission analysis. The placebo marijuana cigarettes weighed 741 to 940 mg (mean, 840 mg) and those containing 1.24 percent Δ^9 -THC weighed 849 to 985 mg (mean, 907 mg); both were supplied by the National Institute on Drug Abuse, were stored at 4°C to minimize chemical degradation, and were maintained in a humidifier at 60 percent humidity and 21°C for 24 hours before the study, to reduce harshness.

The subjects were asked to smoke both the tobacco cigarette and the two marijuana cigarettes in a manner as similar as possible to their usual pattern of smoking tobacco and marijuana. Peripheral venous blood was withdrawn anaerobically immediately before and two minutes after the first two cigarettes were smoked for measurement of the percentage of carboxyhemoglobin saturation, with use of a carbon monoxide-oximeter (Model 282, Instrumentation Laboratory, Lexington, Mass.). After smoking each of the marijuana cigarettes, the subjects were asked to rate their level of intoxication on a scale of 0 to 100 percent, with 100 percent representing the greatest "high" they had ever experienced.

The volume, duration, and number of puffs and the intervals between puffs were measured with a 00 Fleisch pneumotachygraph (linear from 5 to 100 ml per second) connected through a differential pressure transducer (Model MP54-3, Validyne, Northridge, Calif.) (range, \pm 2 cm of water) to an oscilloscopic recorder with a differential integrator-computer and a rapid photographic writer (Model VR6, Electronics for Medicine, Pleasantville, N.Y.). To prevent the pneumotachygraph screen from becoming clogged by smoke particles,⁴ the pneumotachygraph was connected through wide-bore Tygon tubing (length, 70 cm; internal diameter, 1 cm) to the distal end of a glass cylinder (length, 12 cm; diameter, 5 cm) that contained two ventilation ports (each 1 cm in diameter) and was sealed at its proximal end by a rubber stopper. The tobacco or marijuana cigarette was held in a small plastic holder inserted through the rubber stopper. The ventilation ports were left open between puffs to prevent either the extinction of the lighted cigarette or the excessive accumulation of carbon monoxide. During a puff, the smoker covered the ventilation holes with his index and middle fingers so that the entire volume of air drawn through the cigarette could be measured by the pneumotachygraph. The resistance of the pneumotachygraph (0.0068 cm of water per milliliter per second) was considerably lower than that of the cigarette (0.51 cm of water per milliliter per second for tobacco; 0.17 cm of water per milliliter per second for marijuana); therefore, the pneumotachygraph itself was

From the Department of Medicine, University of California at Los Angeles School of Medicine, and the Departments of Psychiatry and Biobehavioral Sciences, Neuropsychiatric Institute, University of California at Los Angeles School of Medicine. Address reprint requests to Dr. Tashkin at the Department of Medicine, University of California at Los Angeles School of Medicine, Los Angeles, CA 90024.

Supported by a grant (ROI DA 03018) from the National Institute on Drug Abuse. Dr. Wu's work was supported by the Chung Shan Medical and Dental College, Taichung, Taiwan.

not likely to have a substantial effect on smoking dynamics. The duration of a puff was timed from the pneumotachygraphic flow tracing. The interval between puffs was defined as the period between the end of one puff and the start of the next.

To measure "wash-in" volume (the volume of air inhaled), inductive plethysmographic coils (Respirace Ambulatory Monitoring Systems, Ardsley, N.Y.) were placed around each subject's rib cage and abdomen.^{5,6} A demodulator converted changes in electrical inductance in the coils during respiratory movements into voltage signals proportional to changes in the volume enclosed by the coils. Changes in the volume of the respiratory system were calculated from the weighted sums of the signals from the rib cage and abdomen; the weights were determined by the least-squares calibration method.⁷ The accuracy of the calibration was confirmed by comparing the inhaled volumes calculated from respiratory inductive plethysmography with spirometric values; the measurements obtained by spirometry and inductive plethysmography agreed within ± 10 percent. The amount of time the inhaled smoke was retained in the lungs (smoke-retention time) was calculated as the interval between the times corresponding to one third of the maximum inhaled volume and two thirds of the maximum volume exhaled following breath holding (Fig. 1). The no-smoking interval was timed from the end of the smoke-retention time to the start of the next puff.

A previously described proportional smoke-trapping device⁸ was connected to the apparatus for measuring the volume of puffs in order to measure the amount of smoke particulates delivered to the smoker's mouth. This device consisted of a plastic cigarette holder through which the mainstream smoke was diverted into two parallel pathways, one containing one capillary tube (pathway A) and the other seven parallel capillary tubes (pathway B). A Cambridge filter pad trapped the smoke that passed through pathway A. The tar trapped by the filter was extracted with methanol and analyzed by means of a spectrophotometer (wavelength, 400 nm). A constant fraction of the tar (12.5 ± 0.53 percent) was retained in the filter over a wide range of puff volumes (30 to 60 ml), puff durations (1 to 4 sec), and puff flow rates (20 to 100 ml per second).⁸ This apparatus, therefore, permitted the actual quantity of smoke particulates delivered to the mouth to be calculated by multiplying the amount of particulates trapped in the Cambridge filter pad in pathway A by seven. At the end of the period of breath holding after each puff, the subjects turned their heads slightly to one side and exhaled the smoke into the large end (diameter, 26 cm) of an adjacent megaphone device, the distal end (diameter, 4.5 cm) of which was fitted with a high-efficiency filter attached to a vacuum system as described by Hinds et al.⁹ After the tar was extracted from the filter with methanol, the exhaled particulates were measured with a spectrophotometer. The amount of smoke retained (deposited) in the respiratory tract was expressed as a percentage of the amount inhaled: percentage deposited = $[1 - (\text{amount of exhaled particulates} / \text{amount of inhaled particulates})] \times 100$.

Each subject's measurements were averaged for each cigarette smoked. These mean values, as well as the number of puffs, the quantity of particulates inhaled, the percentage of inhaled particulates deposited, and the increment in carboxyhemoglobin saturation per cigarette, were averaged for all 15 subjects for each type of cigarette smoked. The subjects' ratings of their degree of intoxication after marijuana smoking were also averaged for all subjects for each type of marijuana cigarette (placebo and 1.24 percent Δ^9 -THC). Two-way analysis of variance (for subject and type of cigarette) was used to determine the significance of differences in smoking patterns, the delivery and deposition of particulates, and the increase in carboxyhemoglobin saturation among types of cigarette.¹⁰ Pairwise comparisons were then performed using testing for least significant differences¹¹; differences were considered significant if P values were < 0.05 .

RESULTS

Descriptive data about smoking in the group of 15 subjects are shown in Table 1. Placebo marijuana and marijuana containing approximately 1.24 percent Δ^9 -THC were smoked in a similar manner. However,

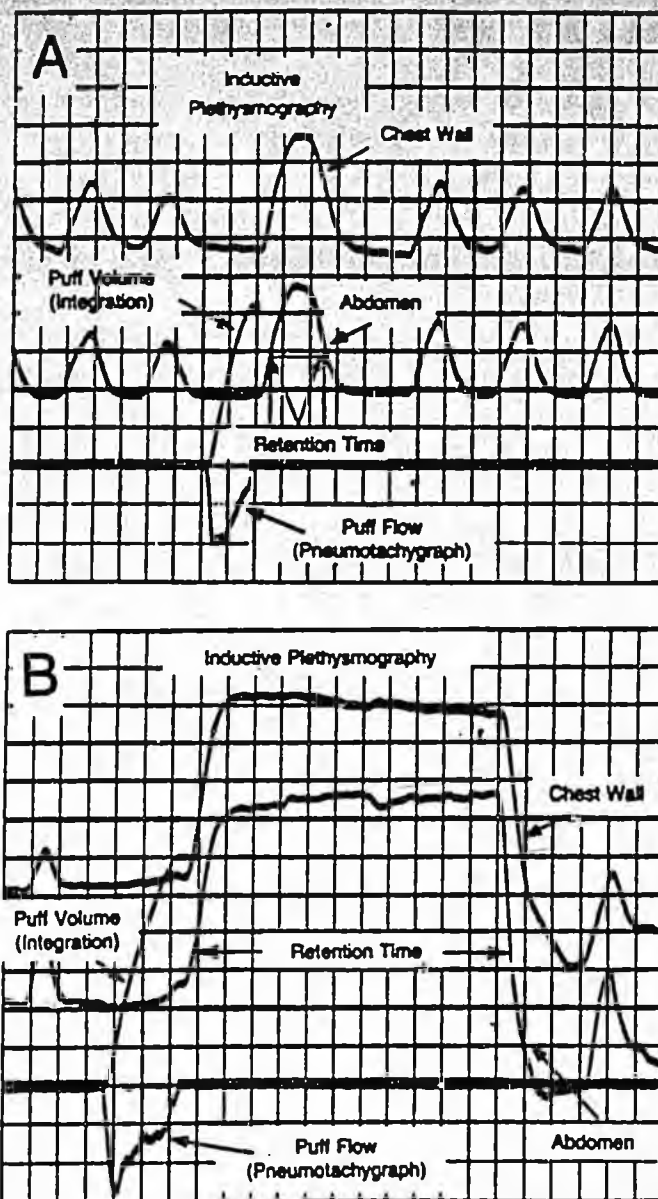


Figure 1. Analogue Tracings of Voltage Signals from Inductive Plethysmographic Coils around the Chest Wall and Abdomen of a Representative Subject and Simultaneous Flow and Integrated Volume Signals from a Pneumotachygraph Incorporated into a Puff-Volume Measuring Device during the Smoking of a Tobacco Cigarette (A) and a Marijuana Cigarette (B).

Note that during marijuana smoking, there is greater amplitude of the voltage signals representing puff volume (measured by the pneumotachygraph) and inhaled volume (measured by the inductive plethysmograph) than during tobacco smoking.

the average volume of puffs was about 70 percent larger ($P < 0.001$) and the duration of puffs about 60 percent longer ($P < 0.01$) during the smoking of marijuana than the smoking of tobacco, regardless of whether the marijuana contained 1.24 or 0.004 percent Δ^9 -THC; significantly more puffs were taken from the tobacco cigarette than from either the placebo marijuana cigarette or that containing 1.24 percent Δ^9 -THC ($P < 0.001$). Although the interval between puffs was less for tobacco than for marijuana smoking ($P < 0.05$), the no-smoking interval, which did not include the breath-holding time after

Table 1. Characteristics of 15 Subjects' Smoking of Tobacco, Placebo Marijuana (0.004 Percent Δ^9 -THC), and Marijuana Containing 1.24 Percent Δ^9 -THC.*

INDEX	TOBACCO	MARIJUANA		P VALUE†
		0.004% Δ^9 -THC	1.24% Δ^9 -THC	
mean \pm SD				
Puff volume (ml)	49.4 \pm 15.2	68.3 \pm 24.8	78.0 \pm 22.8	<0.001
Puff duration (sec)	2.4 \pm 1.1	3.8 \pm 1.9	4.0 \pm 2.2	<0.01
No. of puffs	13.5 \pm 4.0	7.5 \pm 2.3	8.5 \pm 3.1	<0.001
Interval between puffs (sec)	27.0 \pm 8.2	35.3 \pm 12.2	37.6 \pm 14.5	<0.05
Inhaled volume (liter)	1.31 \pm 0.22	1.82 \pm 0.66	1.75 \pm 0.52	<0.002
Smoke-retention time (sec)	3.5 \pm 1.3	13.8 \pm 9.2	14.7 \pm 10.2	<0.001
No-smoking interval (sec)	23.5 \pm 8.5	21.5 \pm 6.4	23.0 \pm 8.8	NS

*All subjects were habitual smokers of both tobacco and marijuana. They smoked their own brands of tobacco cigarettes. Δ^9 -THC denotes Δ^9 -tetrahydrocannabinol; NS denotes not significant.

†P values indicate the significance of comparisons between tobacco and each strength of marijuana; none of the comparisons between the two different strengths of marijuana (0.004 percent vs. 1.24 percent Δ^9 -THC) was statistically significant.

smoke was inhaled, was similar for both substances. The mean inhaled volume was 26 percent greater ($P<0.002$) and the smoke-retention time was four times longer ($P<0.001$) during marijuana smoking than tobacco smoking.

The volume of the portion of the proportional smoke-trapping device through which smoke was delivered was approximately 13 ml. After the first puff, this volume was filled with smoke that was delivered in subsequent puffs; thus, after the first puff, no additional volume of air not containing smoke was included in the measurement of puff volume. When the pneumotachygraph was disassembled from the proportional smoke-trapping device and used to measure puff volume, the difference in the mean volume was negligible (4.2 ± 2.0 ml lower without the smoke-trapping device). Similarly, inhaled volumes determined directly from the cigarette by the inductive plethysmograph, without the attachment of either the pneumotachygraph or the proportional smoke-trapping device, were similar to (within 50 ml) the inhaled volume determined when the subjects smoked through these devices.

The amounts of particulates inhaled, the percentage of inhaled particulates deposited in the respiratory tract, and the differences between the carboxyhemoglobin levels before and after smoking each type of cigarette are shown in Table 2. The major significant difference between smoking marijuana cigarettes containing 0.004 percent Δ^9 -THC (placebo) and smoking cigarettes containing 1.24 percent Δ^9 -THC was that the latter caused a greater degree of intoxication. In addition, the amount of particulates inhaled from marijuana containing 1.24 percent Δ^9 -THC was slightly but significantly greater (20 percent) than that delivered from placebo marijuana ($P<0.05$). In contrast, smoking either type of marijuana was associated with the inhalation of 2.8 to 3 times more insoluble particulates (tar) and with the deposition of 32 to 35 percent more of these inhaled particulates than smoking the subject's own brand of tobacco ($P<0.001$). Consequently, marijuana smoking resulted in a tar burden to the respira-

tory tract that was 3.5 to 4.5 times greater than that produced by tobacco smoking in the same subjects. Furthermore, smoking a single marijuana cigarette caused a fourfold greater increment in carboxyhemoglobin saturation ($P<0.001$) than did smoking a single tobacco cigarette.

DISCUSSION

Long-term adverse pulmonary consequences of tobacco smoking have been shown to be related to dose.¹² For example, the incidence of chronic obstructive pulmonary disease or bronchogenic carcinoma in smokers of fewer than 5 to 10 tobacco cigarettes a day is substantially less than in habitual smokers of more than 20 tobacco cigarettes a day.¹³ Although regular tobacco smokers consume more than 15 tobacco cigarettes a day, most current smokers of marijuana smoke less than 1 marijuana cigarette a day.¹² Even among the estimated 6 million daily smokers of marijuana in the United States,¹⁴ smoking more than five marijuana cigarettes a day is unusual. In view of the many similarities in the smoke contents of marijuana and tobacco,^{15,16} it has been argued that habitually smoking only a few marijuana cigarettes a day may have a proportionately less harmful long-term effect on the lungs than regularly smoking several times more tobacco cigarettes. This argument assumes that the number of cigarettes smoked is directly proportional to the dose of smoke contents inhaled; however, this assumption ignores the ways in which the characteristics of smoking may influence the delivery of the combustion products of cigarettes.^{17,18}

Table 2. Inhalation and Deposition of Particulates, Increases in Blood Carboxyhemoglobin Saturation, and Levels of Intoxication Associated with the Smoking of Tobacco and Marijuana in 15 Smokers of Both Substances.*

INDEX	TOBACCO	MARIJUANA	
		0.004% Δ^9 -THC	1.24% Δ^9 -THC
mean \pm SD			
Inhaled particulates (optical density)	4.9 \pm 2.0	13.5 \pm 6.0†	16.3 \pm 6.3†‡
Percentage of particulates deposited	64.0 \pm 8.9	84.4 \pm 6.9†	86.1 \pm 6.7†
Increase in carboxyhemoglobin saturation (%)	0.60 \pm 0.52	2.99 \pm 1.51†	—§
Degree of intoxication (maximum "high" = 100%)	—	15.3 \pm 6.9	63.9 \pm 18.3†

* Δ^9 -THC denotes Δ^9 -tetrahydrocannabinol.

†Significantly greater than values for tobacco ($P<0.001$ by analysis of variance and testing for least significant difference).

‡Significantly greater than values for marijuana containing 0.004 percent Δ^9 -THC ($P<0.05$ by analysis of variance and testing for least significant difference).

§Not measured.

Few studies have been carried out in which the actual dose of smoke contents delivered to and retained in the respiratory tract during natural smoking has been measured. In our study, both the amount of particulate matter that was inhaled and the amount that was deposited in the respiratory tract were quantified during tobacco and marijuana smoking by means of a simple, new, noninvasive device.⁸ These measurements allowed us to compare the actual dose to the smoker of particulate matter from the smoke of marijuana with that from tobacco. At the same time, the characteristics of smoking were determined in order to ascertain the relation between behavioral variables in smoking and the delivery and retention of smoke contents in the respiratory tract for each type of cigarette. The proportional smoke-trapping device had little measurable influence on smoking dynamics.

Findings from the present study indicate that approximately three times as much particulate matter is delivered to the smoker's mouth during the smoking of a single marijuana cigarette than during the smoking of a single tobacco cigarette of the smoker's own brand. These results are similar to those obtained in studies that used smoking machines to simulate conditions thought to be representative of marijuana and tobacco smoking.^{19,20} Our results also revealed that approximately one third more of the particulates inhaled from the smoke of marijuana are retained in the respiratory tract than is the case when tobacco is smoked. Consequently, the net respiratory burden of particulates was approximately four times greater during marijuana smoking than tobacco smoking.

Several explanations are possible for the greater burden of particulates to the lungs from marijuana than from a similar quantity of tobacco. First, in all 15 cases, the tobacco cigarettes were more densely packed than the marijuana cigarettes and, unlike the marijuana cigarettes, were filter-tipped; therefore, the filtration efficiency of the tobacco cigarettes was greater. Second, the average residual length of the marijuana cigarettes (23 ± 13 mm) was smaller than that of the tobacco cigarettes (37 ± 12 mm), thereby further reducing the filtration efficiency of the marijuana cigarette. However, because the tobacco cigarettes were initially longer and because the filter tip was included in the tobacco butt, the actual quantities of tobacco and marijuana consumed were similar. Third, the subjects' patterns of inhalation in smoking the two types of cigarettes were markedly different; marijuana was smoked with a puff volume that was more than two thirds larger, an inhaled volume one third greater, and a retention time four times longer than the values for tobacco. Although the larger puff volumes for marijuana were partially offset by a smaller number of puffs, this factor may still have contributed to the greater mass of smoke particulates delivered to the mouth in marijuana smoking. The deeper inhaled volumes and, in particular, the severalfold longer retention times during marijuana smoking than during tobacco smoking may have accounted for the greater

percentage of the inhaled particulates from marijuana smoke deposited in the respiratory tract.

The four-to-five-times-greater increments in carboxyhemoglobin saturation during marijuana smoking than tobacco smoking were probably due mainly to differences in how the cigarettes were smoked rather than in the amount of carbon monoxide produced, since syringe-simulated puffs of similar volumes and durations from lit cigarettes yielded approximately 25 percent lower concentrations of carbon monoxide from marijuana than from tobacco. This finding is consistent with the more complete combustion of the more loosely packed marijuana. On the other hand, the subjects' deeper inhalations and, in particular, their considerably longer retention of smoke in the lungs during marijuana smoking than during tobacco smoking made possible a greater uptake of carbon monoxide by the pulmonary microcirculation by means of passive diffusion. We measured the increment in blood carboxyhemoglobin after placebo marijuana (from which the cannabinoids had been extracted), and not after marijuana containing Δ^9 -THC. However, we would not expect appreciable differences between the effects of real marijuana and those of placebo marijuana on blood carboxyhemoglobin levels, since the smoking dynamics and the carbon monoxide delivery of the two types of marijuana cigarettes were similar. The expected physiologic consequences of the markedly greater boost in carboxyhemoglobin levels from a single marijuana cigarette are a higher degree of impairment in oxygen transfer in the lung,²¹ a reduction in the oxygen-carrying capacity of the blood, and impairment in the release of oxygen from hemoglobin in the tissues.²² Moreover, the Δ^9 -THC in marijuana causes dose-related increases in heart rate^{23,24} and thus in cardiac work and myocardial oxygen requirements. Therefore, in persons with underlying coronary artery disease who smoke marijuana, the combined effects of a marked rise in the level of carboxyhemoglobin and the cardioacceleration induced by Δ^9 -THC could lead to a critical imbalance between reduced myocardial oxygen supply and increased demand.

Interestingly, no significant differences in smoking dynamics were noted between placebo marijuana and marijuana containing 1.24 percent Δ^9 -THC, despite marked differences in the subjects' perceived level of intoxication. These findings differ from previous observations in tobacco smokers that puff volume increases when low-nicotine cigarettes are smoked.²⁵ Our results in marijuana smokers are consistent with data from other studies,^{26,27} however, and suggest that the pattern of smoking marijuana is not immediately adjusted to alter the inhaled dose of Δ^9 -THC but, instead, probably represents a learned technique based on previous experiences and interactions.

In conclusion, our findings demonstrate that smoking behavior differs markedly between marijuana and tobacco smoking and that these differences are associ-

ated with a respiratory burden of smoke particulates and absorption of carbon monoxide that are approximately four times greater in the case of marijuana smoking. These results may account for previous findings that smoking only a few marijuana cigarettes a day (without tobacco) has the same effect on the prevalence of acute and chronic respiratory symptoms¹ and the extent of tracheobronchial epithelial histopathology² as smoking more than 20 tobacco cigarettes a day (without marijuana). These observations justify concern about the potential long-term pulmonary consequences of the habitual smoking of only a few marijuana cigarettes a day.

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Prevalence of Drug-Taking Behavior Among Alaskan Youth: Comparisons With National Findings¹

by Bernard Segal, Ph.D.²

ABSTRACT

The present research identified the prevalence and patterns of drug-taking behavior among a statewide sample of youth in grades 7-12. The findings indicated that lifetime experience with psychoactive substances was fairly high. When a comparison was made with national data, prevalence rates within Alaska were found to be quite higher than rates reported among youth in the lower-48 states. Some of the reasons for this high level of drug use and the implications of the findings are discussed.

INTRODUCTION

The United States has witnessed an increase in the frequency and intensity of substance abuse since the late 1960's. The non-medicinal use of illicit mood-altering drugs by elementary, junior and senior high school students, in particular, has become a problem of national concern. Although legal and social sanctions exist against non-medicinal use of psychoactive drugs for recreational or social purposes, drugs continue to be taken, and those youth who take them place themselves at risk for potential legal, social and health problems.

Interest in learning more fully about the nature and extent of drug-taking behavior among the nation's youth prompted the National Institute on Drug Abuse (NIDA) to sponsor a number of national surveys and specific research studies (1-3). Alaska, however, was not included in any of these projects. The current research was undertaken to gain comparable information about Alaska because educators, community planners, policy makers, legislators, and governmental officials and authorities needed to have contemporary knowledge about drug abuse in the state to most efficiently allocate resources to address the problem. High levels of drug use were anticipated due, in part, to the state's last

frontier atmosphere which helped to attract many troubled people to the individualistic risk-taking attitude that prevails in the youthful population, and to significant disposable income, among other contributing factors.

The specific research objectives of this study were: (1) to assess the nature and extent of drug-taking behavior among Alaskan youth, (2) to examine age-cohort differences with respect to drug-taking behavior, (3) to identify psychosocial correlates of drug use, and (4) to explore some of the implications that such phenomena have for treatment and prevention programs. This paper presents the major findings pertaining to the prevalence of drug use in Alaska among youth, compares the findings with results from national surveys, and briefly reviews their implications. The findings pertaining to psychosocial correlates and age differences, as well as a complete description of the project, have been presented elsewhere (4-6).

METHODS

From 1981 through 1982 an extensive statewide study was undertaken to estimate the prevalence of drug use among Alaskan youth. The statewide survey involved eight widely separated urban and rural school districts, representative of the different regions of Alaska except for the Aleutian chain. The locations were Anchorage, Barrow, Bethel, Fairbanks, Juneau, Kotzebue, Nome, and Sitka. Sites were selected in order to obtain a representative sample of the state's junior and senior high school students, rather than sampling school districts. The schools in the sample contain over 75% of the state's junior and senior high school students. Representative samples in the Anchorage and Fairbanks school districts were obtained from each of the junior and senior high schools. Districts in the other locations contained only one junior and senior high school, of which the entire school populations were surveyed.

The sampling procedure within the schools involved two methods, each contingent upon the conditions prescribed by the school district: (1) a random sample from among all students in grades 7-12 whose parents

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²Center for Alcohol and Addiction Studies, College of Nursing and Health Sciences, University of Alaska, Anchorage, 3211 Providence Dr., Anchorage, Alaska, 99508.

Table 2
FREQUENCY AND REGENCY OF DRUG-TAKING BEHAVIOR
Past Year Experience

Percent of Students Who Have Tried/Taken a Drug

Drug	(N = 3,609)		Frequency* (N = 2,021)						Total Once or More
	Percent of Sample Responding	Percent of Sample Who Tried Within Past Year	Once a Month or Less	2-3 Times a Month	Once a Week	2-5 Times a Week	Daily	More Than Once a Day	
Marijuana	88.0	42.6	19.0	7.1	4.0	6.0	2.6	2.8	41.5
Hallucinogens	82.0	7.1	4.9	0.7	0.2	0.2	0.2	0.0	6.4
Cocaine	83.0	15.6	11.0	2.5	0.6	0.7	0.3	0.4	15.5
Heroin	81.9	1.7	1.7	0.2	0.1	0.1	0.1	0.3	2.5
Inhalants	82.6	11.9	7.4	1.4	0.5	0.4	0.4	0.4	10.5
Stimulants	83.1	22.0	12.2	4.0	1.7	1.3	0.8	0.9	20.9
Depressants	82.2	11.8	7.3	2.1	0.6	0.6	0.2	0.5	11.3
Tranquilizers	81.7	11.4	6.5	1.4	0.6	0.3	0.2	0.4	9.4

*Because of missing responses, those who report having tried a drug in the past year will not always correspond to the percent who reported ever trying a drug.

describing frequency of students' use thus represent an aggregation of only seven districts (excluding Anchorage), while the findings pertaining to the recency of use represent the total sample.

Table 2 describes the recency and frequency of drug-taking behavior during the past year. The results indicate that marijuana is the drug experienced most, with 41.5% of the students indicating having experienced it one or more times, and 42.6% having used it during the past year.

Experiences with stimulants and cocaine are less extensive than those shown for marijuana, but are, respectively, the most commonly used substances. Most of the students who tried them did so less than 10 times and once-a-week or less. Experiences with the other drugs tended to be less frequent, with students expressing modest experiences with depressants, inhalants, and tranquilizer type substances. Except for marijuana, and to a lesser degree stimulants and cocaine, use of other drugs appeared to have been chiefly experimental.

3. Gender and Drug-Taking Behavior

Table 3 indicates that a higher percentage of males experienced all the mood-altering drugs except stimulants, for which females showed a slightly higher percentage. This finding is comparable to that reported by Johnston et al. (2) in describing drug use among high school seniors.

Table 3
LIFETIME EXPERIENCES WITH
PSYCHOACTIVE DRUGS BY GENDER

Drugs	Females and Males Who Reported Ever Having Tried a Drug*	
	MALES (N = 1,770)	FEMALES (N = 1,732)
	Percent of Males who Tried a Drug	Percent of Females who Tried a Drug
Marijuana	51.1	48.3
Hallucinogens	10.5	8.7
Cocaine	19.8	17.0
Heroin	3.2	1.2
Inhalants	17.9	15.1
Stimulants	26.3	28.2
Depressants	15.4	13.6
Tranquilizers	12.4	10.9

*107 students did not report gender.

4. Drug-Taking Behavior by Grade

As reflected in Table 4, there was a steady increase in experiences with all types of drugs rising to a peak at grades 11 and 12. The major exception to this pattern was for inhalants, where incidence of use peaked sharply

Table 6
COMPARISONS OF LIFETIME EXPERIENCE WITH
PSYCHOACTIVE DRUGS BY HIGH SCHOOL SENIORS

Drug	Percent Trying			
	Alaskan Seniors (N = 345)	1982* National Seniors (N = 17,500)	1983* National Seniors (N = 16,300)	1984* National Seniors (N = 15,900)
Marijuana	70**	58	57	54.9
Hallucinogens	15	13	12	10.7
Cocaine	37	16	16	16.1
Heroin	1	1	1	1.3
Inhalants	17	13	14	14.4
Stimulants	41	36	36	27.9
Depressants	18	12.8	13.6	13.3
Tranquilizers	15	14	13	12.4

*Source: Johnson (2), National Institute on Drug Abuse.

**Figures are rounded to nearest whole number.

The comparisons show that the rates for experience with drugs among Alaskans aged 12-17 exceeded the rates obtained in the national sample for every substance. The magnitude of the differences range from a low of 2:1 to a high of 3:1. It is apparent that drug-taking behavior occurred at a higher rate among Alaskan youth than among those reported in the national survey, but because of differences in sampling procedures and time of sampling, these differences should be interpreted as a relative comparison rather than exact differences. Nevertheless, the question that arises is: Why are the differences so extensive? One answer may lie in the sampling procedure: youth may be less reluctant to report drug use in a questionnaire than in a personal interview. Another possible explanation is that drug use in Alaska is actually higher. The latter explanation tends to be supported when a comparison is made between high school seniors in Alaska and seniors in Johnston et al's (2) national study. Representative findings from these more comparable surveys are presented in Table 6. Except for heroin, drug experience rates for Alaskan seniors exceed the rates obtained in the national senior sample.

CONCLUSIONS

The results of this study indicate a pattern of drug-taking behavior that is consistent among adolescents across the state. Furthermore, prevalence levels for lifetime experiences in Alaska, despite limitations in comparing the Alaskan data with national household data, are higher than the prevalence rates reported in the national survey, and in the national survey of high

school seniors. Another possible limitation to the study is the fact that it is not known whether the respondents who reported taking a drug actually took the "real thing" as opposed to a "look-alike" or substitute substance, except for marijuana.

While this problem is common to all forms of survey research, it need not detract from the basic findings. What is important to consider is that the respondents, regardless of whether they may have taken real or substitute drugs, reported that they were involved in some form of drug-taking behavior, and it is *their* account of their behavior in which we are interested. Additionally, the issue of the reliability and validity of self-reports concerning drug-taking behaviors always comes into question, but sufficient research has been conducted on this problem to conclude that self-reports are generally reliable and valid and tend to be free from systematic bias.

The major question that arises is: Why are the prevalence rates so high in Alaska? Part of the answer seems to be that drugs are readily available, and that many young people are actively interested in seeking these drugs. Furthermore, mood-altering drugs may have become incorporated into the "Alaskan life-style." In this context, experimental or recreational drug-taking behavior is viewed primarily as a social phenomenon and not as deviant behavior. In Alaska this life style pattern takes on a special quality. Perhaps many who try or use drugs recreationally perceive their drug-taking behavior as part of a life-style that represents a breaking away from the traditional estab-

in use until 1986) should consider having their water tested for lead content. This measure is particularly important if there are small children in the household. Many people with lead plumbing will prove to have lead-free water because lime salts have formed an internal coating in their pipes, but the only proof is a negative test result.

People who live in an area known to have high levels of radon should begin with a test of the household atmosphere. If airborne radon is found at high levels, and if the house depends on well water, the water should be among the suspected sources.

A rule of thumb for people drinking water from private or shared wells would be to have a one-time test for lead, petrochemicals (if a gas tank is located near the well), and specific pesticides or herbicides that may have been used in the area. Thereafter, such tests can be done at the user's discretion. Water from such sources should be tested yearly for bacteria.

The Safe Drinking Water Hotline (800-426-4791) can answer general questions about water safety, but questions about specific water sources should be directed to the local water supplier. Other agencies that can provide information include state departments of public health or environmental engineering, as well as the regional offices of the Environmental Protection Agency.

Marijuana: Rough Stuff

Daily smokers of marijuana may damage their lungs as badly as smokers of tobacco cigarettes—even though most people smoke many fewer joints than cigarettes.

As part of a study of how lung diseases develop, researchers at the University of Arizona have been following a group of healthy Tucson residents for about 15 years. Every couple of years, the subjects have been asked about smoking. Many of them inquired whether they

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should count their use of marijuana. So the investigators began including systematic inquiries about "non-tobacco" cigarette smoking in 1981-83.

The 990 subjects, who were between the ages of 15 and 40, were asked about symptoms of chronic lung disease (such as cough, phlegm production, and wheezing), and their lung function was tested.

As might be expected, people who smoked both tobacco and marijuana were much more likely than nonsmokers to report symptoms. People who smoked only marijuana were almost twice as likely as complete nonsmokers to report phlegm production and wheezing; so they were hardly symptom-free. On some tests of lung function, smoking marijuana but not tobacco led to worse results than smoking tobacco but not marijuana.

Careful tests for evidence of obstruction in the airways (a warning sign of chronic bronchitis or emphysema) revealed significant abnormalities in the men who regularly smoked marijuana but not tobacco. Marijuana-smoking women gave no evidence of airway obstruction, probably because they tended to smoke less often and less heavily than the men (*British Medical Journal*, December 12, 1987, pp. 1516-1518).

These findings are consistent with those from another study, conducted at the University of California at Los Angeles School of Medicine. The California investigators showed that marijuana cigarettes, as normally smoked by people experienced with both tobacco and marijuana, put more harmful material into the lung. About 5 times the amount of carbon monoxide is inhaled from a marijuana cigarette as from a single, filter-tipped cigarette, and 3 times the amount of tar is deposited in the airways. Exposure to these substances is increased with marijuana at least partly because inhaling is deeper and breath-holding continues longer than with tobacco (*New England Journal of Medicine*, February 11, 1988, pp. 347-351).

The lungs of anyone who smokes daily are damaged. At this frequency of use, the level of damage from marijuana and from tobacco do not differ all that much.

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Correlation between Drug Use by Teenagers and Drug Use by Older Family Members*

Joseph Gfroerer, BA

*Division of Epidemiology and Statistical Analysis
National Institute on Drug Abuse
Rockville, Maryland 20857*

ABSTRACT

This study examines the relationship between drug use by teenagers and older family members living in the same household, using data from the National Survey on Drug Abuse. Drug use by teenagers was found to be correlated with drug use by fathers, mothers, and older siblings, in that teenagers were more likely to be drug-users if the older adult was also a drug user. Correlations were significant across different drug types, but the most consistent relationship was between marijuana use by youth and marijuana use by the adult.

INTRODUCTION

The purpose of this paper is to examine the relationship between teenage drug use and drug use by older family members living in the same household, in terms of the statistical correlations in the prevalence of use of various drugs. Drug use here includes cigarette and alcohol use, as well as use of marijuana and cocaine. Rittenhouse and Miller recently performed a similar analysis using data from 1974-1977 [1]. The present study analyzes more recent (1979-1982) data from the same source and compares results to the previous study. Several new issues are also examined in the present

*The views presented in this paper are not necessarily those of the National Institute on Drug Abuse or the U.S. Department of Health and Human Services.

study, including the relationship between marijuana use by parents and teenage drug use.

A number of previous studies indicate that teenage drug use is correlated with drug use of older family members [1-13]. Generally, mothers' and siblings' drug use have been found more highly correlated with teenage drug use than has drug use by fathers [1, 2, 6-8]. However, some studies have shown a high correlation between fathers' drug use and drug use by their offspring [2, 3, 7, 9-13].

Relatively few studies have been done which involve pairs of teenagers and older siblings [1]. Also, much of the previous research on adult and youth drug use has been based on specialized populations or has been based on adult drug use reported by youth. Thus, although the research is consistent in supporting the relationship between teenage drug use and older adult drug use, questions still remain regarding the relative strength of the relationship for the different older family members. There have also been conflicting results regarding differences in parental influence depending on the sex of the teenager [7-9, 12, 13]. In addition to these questions concerning more refined descriptions of the relationship between teenage and adult drug use, there has also been debate regarding the explanation of the relationship in general. As Fawzy *et al.* state [10], the two prominent interpretations are the social learning model and the family circumstance model. The social learning model suggests that teenagers imitate adult behavior by responding to what adults define as appropriate. One version of this theory [9] is that teenagers imitate their parents' use of alcohol and cigarettes and thus become more likely to advance to the use of illicit drugs. The family circumstance model implies that correlations between adult and teenage drug use are not drug specific, but are more general and result from unfavorable family circumstances related to adult drug use. Thus, drug use by youths becomes more likely as a result of the circumstances in the household, not because of imitation.

The present study is intended to further investigate these issues, using a nationally representative sample of youth-adult pairs in which each individual reported his/her own drug use.

METHODS

A file of youth-adult pairs from the 1979 and 1982 National Surveys on Drug Abuse was used for the study [14, 15]. The National Survey is a

national probability sample survey of households which is sponsored by the National Institute on Drug Abuse (NIDA) and conducted periodically. In sample households, interviews are conducted with either (1) no persons, (2) one adult (age 18+) only, (3) one youth (age 12-17) only, or (4) one adult and one youth. To encourage honest reporting, respondents use self-administered forms to answer drug use questions. Data from each sample person are assigned sampling weights which reflect selection probabilities, nonresponse adjustment, and poststratification. These weights allow the computation of nationally representative estimates of drug use in the household population.

Using data from households in which both a youth and adult were interviewed, a file of youth-adult pairs was created. Based on data from several questions regarding relationships between household members, the youth-adult pairs file was restricted to pairs in which the adult was a parent or older sibling of the youth. All youths in this study are age 14 to 17, older siblings are 18 to 25, and parents are 30 to 64. The restrictions on youth and older sibling age were made because levels of drug use for 12-13 year olds are low and also to be consistent with the earlier study. The restriction on parent age was made to exclude cases that involve unlikely age combinations of youth and parent which may have occurred if the adult was incorrectly coded as the parent.

These selection criteria resulted in a file of 1,177 youth-adult pairs. Of these, 303 included fathers, 450 included mothers, and 424 included older siblings. To compensate for varying selection probabilities and nonresponse, each pair was assigned a weight equal to the product of the individual youth and adult weights. This is appropriate since within every household, the selection of a youth and an adult was independent. Some bias is introduced by factoring the household nonresponse adjustment twice into the pair weight, but this bias is probably small since the survey obtains over 80% response. In any event, the data necessary to correct this bias were unavailable. Pair weights were further adjusted to provide estimates that give equal weight to the 1979 and 1982 data.

Analyses were carried out separately for each of the three types of youth-adult pairs: youth-father, youth-mother, and youth-older sibling. Logistic regression analysis was used to test the significance of the correlation between adult drug use and drug use by youth [16]. All test statistics were adjusted to account for the design effect ($deff = 1.5625$) of the survey and the equal weighting of the 1979 and 1982 data.

The first stage of the analysis was the computation of estimates of drug use prevalence for youths in each of the three subsamples. In each sub-

sample, estimates of youth drug use were computed separately for youth-adult pairs in which the adult was a drug user and for pairs in which the adult was not a drug user. Differences in prevalence were evaluated using *t* tests, and zero-order correlations between adult and youth drug use were also computed. This preliminary analysis provided a basic description of the relationship between youth drug use and older adult drug use. However, the *t* tests and zero-order correlations can be misleading in studying the relationship, since high correlations could result from the fact that both persons in each youth-adult pair are living in the same environment. To control for this effect, logistic regression analysis was used to test the correlation between adult drug use and drug use by youth, with geographic region and population density, as well as age of youth included as independent variables in all logistic regression models. Several measures of youth drug use were employed as dependent variables one at a time, and several measures of adult drug use were entered one at a time as independents and tested for statistical significance with *F* tests. In this manner, the relationship between youth and adult drug use was tested for significance, after controlling for age of youth, geographic region, and population density.

To investigate specific issues such as differences in correlations by sex of the youth and the degree to which family circumstances explain correlations, other independent variables were introduced into the models as controls and also to be tested for significance. Also, some models were tested on specific subgroups of the population as a way of controlling for certain factors.

The methodology used in this study is similar but not identical to the approach taken by Rittenhouse and Miller. The inclusion of nonresponse and poststratification adjustments to the weights here was not done in the previous analysis, but this should have little impact on the results. The use of logistic regression analysis is an enhancement on the previous study, but should not yield significantly different results. The *F* tests used in the present study are equivalent to two-tailed *t* tests, whereas the previous study employed one-tailed tests. Two-tailed tests are used here to allow for the possibility that adult and youth drug use may be negatively correlated in some cases. For positive correlations this difference in testing, in addition to variance adjustments done in the present study, will make the tests slightly more conservative than in the previous study so that some nonsignificant results here may have been determined significant using the methodology of the previous study.

RESULTS

Tables of prevalence estimates were too numerous to include, but Tables 1-3 serve as examples of these data. Tables 1-3 demonstrate that teenagers are more likely to be drug users if their father smokes, if their mother has used marijuana, or if their older sibling uses marijuana. In particular, these three measures of adult drug use are highly correlated with youth marijuana use. Teenagers are twice as likely to have tried marijuana if these older adult drug use patterns are present in the household. Other tables such as these also show significant differences in youth drug use according to use of other drugs by older adult family members.

Table 1. Youth Drug Use (in %) According to Past Month Cigarette Use by Father

Youth drug use ^a	Father current smoker (n = 146)	Father not current smoker (n = 157)	Statistical significance (p value)	Correlation coefficient
Current cigarette use	18.9	7.6	.026	.17
Current alcohol use	52.3	27.1	.001	.26
Moderate alcohol use	24.8	6.8	.001	.25
Lifetime marijuana use	58.6	33.3	.001	.25
Current marijuana use	34.8	9.9	.001	.31
Lifetime cocaine use	10.8	2.4	.025	.17

^aCurrent use is defined as used at least once in the past month. Moderate use is defined as used at least 4 days in the past month. Lifetime use is defined as used at least once in lifetime. *p* values greater than or equal to .1 are designated N.S.

Table 2. Youth Drug Use (in %) According to Lifetime Marijuana Use by Mother

Youth drug use ^a	Mother has used marijuana (n = 165)	Mother never used marijuana (n = 285)	Statistical significance (p value)	Correlation coefficient
Current cigarette use	37.2	11.2	.001	.25
Current alcohol use	42.1	37.1	N.S.	.04
Moderate alcohol use	31.1	16.1	.009	.13
Lifetime marijuana use	76.7	34.2	.001	.30
Current marijuana use	48.3	23.5	.001	.19
Lifetime cocaine use	38.7	9.9	.001	.29

^aCurrent use is defined as used at least once in the past month. Moderate use is defined as used at least 4 days in the past month. Lifetime use is defined as used at least once in lifetime. *p* values greater than or equal to .1 are designated N.S.

Table 3. Youth Drug Use (in %) According to Past Month Marijuana Use by Older Sibling

Youth drug use ^a	Older sibling used marijuana (n = 130)	Older sibling did not use marijuana (n = 294)	Statistical significance (p value)	Correlation coefficient
Current cigarette use	35.5	15.3	.002	.23
Current alcohol use	50.1	37.0	.067	.12
Moderate alcohol use	24.9	11.1	.017	.18
Lifetime marijuana use	66.8	35.0	.001	.30
Current marijuana use	30.2	13.0	.005	.21
Lifetime cocaine use	3.6	7.3	N.S.	-.07

^aCurrent use is defined as used at least once in the past month. Moderate use is defined as used at least 4 days in the past month. Lifetime use is defined as used at least once in lifetime. *p* values greater than or equal to .1 are designated N.S.

The results of the basic logistic regression analysis which included controls for age of youth, geographic region, and population density are summarized in Tables 4-6. The tables show the level of statistical significance for each measure of adult drug use in the models when different measures of youth drug use are inserted as the dependent variable. Current marijuana use by fathers and mothers were excluded from models because there were too few cases in the sample in which parents reported such use. An example of the interpretation of the data in Tables 4-6 is that the relationship between fathers' and youths' current cigarette use (Table 4) is significant at the .031 level. Small *p* values indicate strong relationships. Readers should be aware that significance levels refer to individual tests and are not adjusted for multiple testing. Since many tests are performed in this analysis, it is expected that a small number of the significant results are incorrectly specified.

In general, the analysis showed a strong correlation between drug use by youths and drug use by the mothers, fathers, and older siblings of youths. Although not shown by these tables, every significant correlation was positive in that for families where the parent or older sibling used a drug, the youths were more likely to be drug users.

Youth cigarette use was related less with fathers' drug use than it was with mothers' and older siblings' drug use. Alcohol use by youth was related to drug use by all three adult categories. Youth marijuana use was the most strongly related to adult drug use. Youth lifetime marijuana use was significantly related to use of each drug by fathers, mothers, and older

Table 4. Significance (*p* values) of Correlation between Drug Use of Fathers and Youths, after Controlling for Age of Youth, Geographic Region, and Population Density

Youth drug use ^a	Fathers' drug use			
	Current cigarette use	Current alcohol use	Moderate alcohol use	Lifetime marijuana use
Current cigarette use	.031	N.S.	N.S.	N.S.
Current alcohol use	.001	.001	.001	.051
Moderate alcohol use	.015	N.S.	N.S.	N.S.
Lifetime marijuana use	.001	.001	.001	.001
Current marijuana use	.001	.006	.002	.001
Lifetime cocaine use	.041	N.S.	N.S.	N.S.

^aCurrent use is defined as used at least once in the past month. Moderate use is defined as used at least 4 days in the past month. Lifetime use is defined as used at least once in lifetime. *p* values greater than or equal to .1 are designated N.S.

Table 5. Significance (*p* values) of Correlation between Drug Use of Mothers and Youths, after Controlling for Age of Youth, Geographic Region, and Population Density

Youth drug use ^a	Mothers' drug use			
	Current cigarette use	Current alcohol use	Moderate alcohol use	Lifetime marijuana use
Current cigarette use	.001	.065	.051	.001
Current alcohol use	N.S.	.001	.003	N.S.
Moderate alcohol use	.054	.012	.073	.002
Lifetime marijuana use	.008	.001	.001	.001
Current marijuana use	.007	.001	.001	.001
Lifetime cocaine use	.001	.001	.010	.001

^aCurrent use is defined as used at least once in the past month. Moderate use is defined as used at least 4 days in the past month. Lifetime use is defined as used at least once in lifetime. *p* values greater than or equal to .1 are designated N.S.

siblings at the .008 level of significance or less. Of the drugs used by adults, marijuana was the most strongly associated with both lifetime and current marijuana use by youth. Youth cocaine use was not significantly related to drug use by fathers or other siblings, but was related to mothers' drug use.

The relationship between adult drug use and youth lifetime marijuana use was explored further by repeating significance tests using a restricted sample of youths—those who had used both cigarettes and alcohol in their

Table 6. Significance (*p* values) of Correlation between Drug Use of Older Siblings and Youths, after Controlling for Age of Youth, Geographic Region, and Population Density

Youth drug use ^a	Older siblings' drug use				
	Current cigarette use	Current alcohol use	Moderate alcohol use	Lifetime marijuana use	Current marijuana use
Current cigarette use	.011	.014	.054	.001	.001
Current alcohol use	N.S.	.001	.012	.006	N.S.
Moderate alcohol use	N.S.	.016	.001	N.S.	.001
Lifetime marijuana use	.008	.001	.001	.001	.001
Current marijuana use	.030	.051	N.S.	.001	.004
Lifetime cocaine use	N.S.	N.S.	N.S.	N.S.	N.S.

^aCurrent use is defined as used at least once in the past month. Moderate use is defined as used at least 4 days in the past month. Lifetime use is defined as used at least once in lifetime. *p* values greater than or equal to .1 are designated N.S.

lifetime. For this restricted sample, the strength of the relationship was reduced, but it remained significant in most cases, indicating that even among youths who have already tried cigarettes and alcohol, marijuana use is more likely to occur if parents or older siblings use drugs. This is especially true if older adults have used marijuana. However, current cigarette and current alcohol use by fathers, current cigarette use by mothers, and current alcohol use by older siblings were not significantly related to youth lifetime marijuana use in this restricted sample of youths.

The significant correlations found between adult marijuana use and youth drug use were explored further by introducing controls for adult cigarette and alcohol use. If these controls diminished the strength of the correlations, it would have indicated that the correlations may have occurred spuriously, simply because parents who used cigarettes and alcohol were more likely to have tried marijuana. However, this was not the case. The inclusion of current cigarette and moderate alcohol use by adults as independent variables in the models generally resulted in little change in the significance levels of the relationship between youth drug use and adult marijuana use (Table 7). Thus, even after controlling for adult cigarette and alcohol use, marijuana use by adults was still correlated with youth drug use. Two exceptions were found, however. The significant relationship between mothers' lifetime marijuana use and youth current marijuana use became nonsignificant when the mothers' moderate drinking was included as an independent variable. Similarly, the significant relationship between siblings' lifetime marijuana use and youth current alcohol use became nonsignificant when siblings' moderate drinking and current smoking were included in the model.

The interactive effect of current cigarette and moderate alcohol use by adults was also tested during this stage of the analysis. The interaction was significant in only one of 18 separate tests (six youth drug use measures for father, mother, and sibling pairs), and that was at the .015 level of significance. The significant result implies that the effect of sibling use of both cigarettes and alcohol on youth current alcohol use is less than the sum of the effect of cigarettes and alcohol separately. The fact that most tests were not significant indicates that, in general, the effects of adult cigarette and alcohol use are additive.

Differences in parental influence for teenage boys and girls were studied by testing the interaction of sex of youth with fathers' and mothers' drug use in relation to current alcohol and lifetime marijuana use by youths. Only three tests out of 16 were significant at the .1 level. Current alcohol use

Table 7. Significance (p values) of Correlation between Marijuana Use of Adults and Drug Use of Youths, after Controlling for Age of Youth, Geographic Region, Population Density, Adult Current Smoking, and Adult Moderate Alcohol Use

Youth drug use*	Adult marijuana use			
	Fathers' lifetime marijuana use	Mothers' lifetime marijuana use	Older siblings' lifetime marijuana use	Older siblings' current marijuana use
Current cigarette use	N.S.	.009	.002	.002
Current alcohol use	N.S.	N.S.	N.S.	N.S.
Moderate alcohol use	N.S.	.076	N.S.	.081
Lifetime marijuana use	.001	.001	.001	.004
Current marijuana use	.025	N.S.	.016	.042
Lifetime cocaine use	N.S.	.074	N.S.	N.S.

*Current use is defined as used at least once in the past month. Moderate use is defined as used at least 4 days in the past month. Lifetime use is defined as used at least once in lifetime. p values greater than or equal to .1 are designated N.S.

by mothers was more strongly correlated with boys' current alcohol use than with girls' current alcohol use (p value = .003). The relationship between mothers' moderate alcohol use and youth current alcohol use was stronger for girls than for boys (p value = .058). Fathers' current cigarette use was more strongly related to their sons' lifetime marijuana use than it was to their daughter's lifetime marijuana use (p value = .021). There appeared to be no consistent overall pattern to these interactions, and since most tests were not significant, the general result is that parental influence is similar for teenage boys and girls.

To study the relationship between levels of drug use by older adults and teenage drug use, the independent variable "days used alcohol in the past month" was tested in the logistic models for all three adult-youth groups. These models were tested on the subset of adult-youth pairs in which the adult had used alcohol at least once in the past month. Also, "days used marijuana in the past month" by older siblings was tested, again restricting the analysis to siblings with at least one day of marijuana use in the past month. For most measures of youth drug use, days of use by older adults was not significantly correlated. Several exceptions were noted, however. Youths became more likely to be lifetime marijuana users as days of alcohol use by fathers (p value = .004) and mothers (p value = .091) increased, and also as older siblings' days of marijuana use increased (p value = .017). Increases in days of marijuana use by older siblings were also associated with

a greater likelihood of current cigarette use by youth (p value = .006). Finally, teenagers became more likely to have moderate alcohol use as older siblings' days of alcohol use increased (p value = .091).

Data collected in the National Survey on Drug Abuse regarding family circumstances are rather limited, so investigation of the impact of this factor must be considered as merely suggestive. All statistical testing shown in Tables 4-6 was redone after adding family circumstance variables into the models as controls. These variables were family income for fathers, mothers, and siblings, and marital status for fathers and mothers. Significance levels were essentially unchanged for youth-father and youth-sibling samples, indicating little impact of family circumstances and supporting the social learning theory. For the youth-mother sample, marital status was highly correlated with youth drug use, in that teenagers with divorced or separated mothers were more likely to be drug users. As a result, when marital status was included in the logistic models, several of the significant correlations indicated in Table 5 became nonsignificant. Most did remain significant, however, providing evidence that the social learning process is an important factor in teenage drug abuse.

DISCUSSION

The results of this study clearly support previous results which show a strong relationship between teenage drug use and drug use by older family members. The majority of the statistical tests of regression coefficients for adult drug use were significant, and all of these coefficients, without exception, indicated a positive correlation.

More specific issues can be addressed by the results of the study. In contrast with the previous study using 1974-77 data [1], the present study found fathers' drug use, as well as that of mothers and older siblings, to be correlated with teenage drug use. The previous study found no correlation with fathers' drug use. The reason for this different result is unknown. Given the more conservative nature of the statistical testing done here, it is unlikely that the different result is due to random variation. Regarding the different theories attempting to explain the correlations, the results suggest that although family circumstances are an important factor, the social learning process plays a major role in youth drug use. While the results are not conclusive, they may provide evidence of a "generalized imitation" of older adult behavior which is not drug-specific and which occurs for all older

adult types. Significant relationships were found across different drug types for fathers, mothers, and older siblings. However, some specificity was evident, particularly for marijuana, as indicated by the significant correlations between adult and youth marijuana use after controlling for adult cigarette and alcohol use (Table 7). The specificity of the youth and adult marijuana correlation is further supported by the significance of the relationship even among youths who have already used cigarettes and alcohol. This result contradicts the theory [9] that youths learn alcohol and cigarette use from parents, and thus become more likely to use marijuana mainly because of their experience with the licit drugs. On the contrary, there appears to be a more direct relationship between parent and youth marijuana use.

Since teenagers and their older siblings have the same parents, the parental influence on their children's drug use would be expected to occur for the older siblings also. Thus, correlations between youth and older sibling drug use might occur as a result of this common parental influence. It is not possible from this study to evaluate the independent effect of older sibling drug use on teenage drug use, after controlling for parental drug use, since only two persons per household were interviewed. However, the fact that youth-older sibling correlations were just as strong as youth-parent correlations suggests that there is some independent effect of older sibling drug use.

The level of alcohol use by adults, measured by the number of days used in the past month (excluding adults with no use), was not correlated with youth drug use as strongly as was the qualitative variable, defined as use vs nonuse of alcohol in the past month. In other words, for most drugs the likelihood that teenagers had used that drug did not significantly decrease as the level of adult alcohol use decreased, except when the level of adult use became total abstention. This was the case for all three older adult groups and also for the level of marijuana use by siblings. This suggests that even infrequent use of drugs by adults may influence teenagers to experiment with drugs themselves.

The interactive effect of adult cigarette and alcohol use on youth drug use was not found significant, in contrast to the previous study which did find significant interaction. In both studies this test did involve small cell sizes, so random variation could possibly explain the different results.

The results here indicate that fathers' and mothers' influence on teenage drug use is not significantly different for teenage boys and girls. Once again, however, small cell sizes suggest caution in interpreting this result.

Differences in results between this study and the previous study involving a similar design indicate the need for further investigation of these issues.

Certainly the issue of differences and similarities in influence by fathers, mothers, and older siblings has not been resolved since the two studies had conflicting results for fathers. Also, the significant correlation between adult and youth marijuana use found here needs further study. Since the only measure of parent marijuana use that was tested in this study was "ever used," questions arise regarding the meaning of the correlation. In some cases, parental use may only have occurred before the youth was born. Information on recency of parental use in relation to the age of the youth would be helpful in addressing this. Unlike cigarette and alcohol use, some parental and older sibling use of marijuana might occur without the knowledge of the teenager, raising further questions about interpreting the relationship between adult and youth marijuana use. Youth perception of adult marijuana and other illicit drug use may therefore be important to consider. Parental attitudes about marijuana use may also be important to consider since the correlation between parents' lifetime use and teenage use may reflect a more tolerant attitude on the part of parents who have previous experience with marijuana. Further study of the impact of parental marijuana use on teenage marijuana use will have increasing importance in the coming years as larger proportions of teenagers will have parents that have used marijuana. This phenomenon is shown by comparing marijuana use of parents of teenagers in this study to that of parents of younger children. Application of weights to produce nationally representative estimates from this study resulted in lifetime marijuana prevalences of 17% for fathers of 14-17 year olds and 14% for mothers of 14-17 year olds. For comparison, estimates of lifetime marijuana prevalence for parents whose oldest child is under age 12 were computed from the 1982 National Survey on Drug Abuse [17]. Results showed that 54% of these fathers and 42% of these mothers had used marijuana. This represents a tripling of marijuana experience among parents of future teenagers.

Unfortunately, the analysis conducted here and in the previous similar study will not be possible with future National Survey data, since a maximum of one respondent will be selected per household beginning with the 1985 Survey. However, further and more powerful analyses could be done by combining data from all of the Surveys from 1974 through 1982.

In conclusion, despite some unanswered questions regarding specific issues in this study, there is clearly a strong correlation between drug use by teenagers and drug use by older family members. While there are certainly other influences on youth drug use (such as peer influence) which were not addressed, the data analyzed here indicate that prevention of drug use by

teenagers may be promoted by fathers, mothers, and older siblings abstaining from the use of cigarettes, alcohol, and marijuana.

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Heroin Availability and Aggregate Levels of Use: Secular Trends in an Urban Black Cohort

Peter A. Messeri, PhD
Ann F. Brunswick, PhD

Public Health (Sociomedical Sciences)
Columbia University
New York, New York 10032

ABSTRACT

The influence of heroin availability on the aggregate level of use of this drug was investigated for a normal Black cohort (born between 1952 and 1957) who grew up in Harlem (New York City). Data obtained on the second and third waves of a panel study were used to estimate annual rates of heroin initiation and cessation from the mid-1960s through 1983. The aggregated time-series variables indicated that initiation into heroin use was largely confined to adolescence and that cessation rates exhibited substantial year-to-year fluctuations with no apparent relationship to either chronological age or calendar year. Respondents born before 1955, however, had much higher rates of heroin use than those born in later years. Temporal trends in initiation and cessation were uncorrelated with changes in the purity of heroin sold in New York City between 1973 and 1983, suggesting that aggregate levels of heroin use in this sample were little affected by changes in supply. More speculatively, cohort differences in lifetime prevalence may reflect varying availability at the times younger and older cohorts entered adolescence. This possibility could not be directly tested because of the absence of reliable purity data going back sufficiently far in time.

INTRODUCTION

Over the last decade or so, considerable information has been gathered for tracking national, state, and local trends in the nonmedical use of psychoactive substances (see Reference Note). These data, augmented with studies documenting ebbs and flows in drug use for more remote times [1, 2], clearly

and physical disabilities. Furthermore, the successful of giving care to these blind, deaf, and physically disabled babies.

expensive hospital and home treatments, support and encouragement for parents, market for low birthweight babies" during of life, according to a report in the July 25. Infants born weighing 4 pounds or less them from poor rural families. About half ned to an "infant development program," intensive care unit, these babies were put on and provided with daily activities, including motion exercises, oral stimulation with recordings of parents' voices, classical music, and heartbeat. Parents participated in art and were taught exercises to use with the infant from the hospital. Parents also received information on infant care needs and difficulties.

Infants and their parents were given the care usually provided in such cases. The experimental program had significantly higher physical development scales at 1 and 2 months. Dr. Daniel B. Resnick and his colleagues of the College of Medicine in Gainesville. Only 4 percent of the experimental group had severe impairments of vision at age 2, compared with 26 percent of the control group.

How much these interventions cost about \$3,600 per infant. The "best" preventive technique, say the researchers, will focus on how long-lasting the interventions and methods were most critical.

Recent research done while he was at the Agriculture Department's Human Nutrition Research Center on Aging in Boston, indicates that it is not necessarily the primary reason malnutrition affects night vision.

Rats fed a growth-stunting diet (having only a third to a fifth of their normal protein intake) along with four times the daily requirement for vitamin A suffered night blindness, despite maintaining sufficient levels of vitamin A in the eye. Rats fed a fully balanced diet, but with only enough calories to maintain the size and weight of animals on the protein-deficient diet, suffered even worse night vision — again while maintaining normal eye levels of vitamin A. Bankson says this suggests that a lack of protein and/or energy can also cause night blindness.

How marijuana may affect immunity

It has been known for years that smoking marijuana harms the body's immune system, says Eliezer Huberman of Argonne (Ill.) National Laboratory. His new cell-culture studies now suggest why. He has found that although tetrahydrocannabinol (THC), the main psychoactive ingredient in marijuana, stimulates maturation of key immune-system cells called monocytes, "this maturation is defective." Monocytes not only help stimulate antibody production, but also can kill and engulf foreign cells, like bacteria.

When Huberman treated "highly immature" monocyte-precursor cells with THC, the maturation suddenly stopped in a middle, incomplete stage. Huberman says that if similar monocyte impairment occurs in heavy marijuana smokers, it could heighten their susceptibility to infection. Details of the study will appear in the Aug. 15 PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES.

initial success, possibly because donor islets were collected. It is sure to be time to collect many islets. Rapotte says his group has also extracting high yields of pure islet surgeons isolate sufficient quantities scheduled to begin shortly.

Another potential advantage certain freeze-thaw conditions selectively killing off donor "passive" blood cells that trigger an immune tissue. Rapotte's group has cryopreserved rat islets grafted in trials longer than grafted in. Researchers have not yet proved they are in fact solely responsible for rejection.

Working on the assumption that tissue and leukocytes different colleagues at the Medical Research Council in England, are looking for the best method of rejection of the transplanted islet that the survival of islets is optimized. Taylor suspects that the thaw procedure, Taylor suspects leukocytes. Since there has been evidence that leukocytes do poorly when frozen quickly, at least some islets can survive under a preliminary conclusion is that they can. says Taylor, islets appear to be able to survive a range of cryopreservation conditions. "Why this should be," he says, "is the uppermost in cryobiologists' mind."

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UMI



While no actual link between marijuana use and disease has been shown, immunological tests have produced some troubling results.

Frequent marijuana smokers may be at increased risk from viruses, foreign bacteria, and disease, warn researchers at the University of Illinois in Chicago.

When THC, or tetrahydrocannabinol, the psychoactive ingredient in marijuana, was placed into human blood samples, researchers David Ou and Mark Wiederhold noticed blood-cell changes that could suppress the ability of the body's immune system to combat disease.

What they observed were decreased numbers of proteins, called receptors, on the outer membrane of disease-fighting white blood cells. Without the receptors, immunologist Wiederhold says, the white blood cells can't identify or interact with other substances and thus might not be able to coordinate counterattacks against invader diseases.

Although no actual link between marijuana use and disease has been shown, the two researchers' findings not only cast a shadow across the frequent recreational use of marijuana but raise doubts about the medical advisability of using marijuana and its chemical components, known as cannabinoids, to prevent nausea in patients undergoing chemotherapy for cancer and to treat increased eye pressure associated with glaucoma.

"Possibly a slight modification in the structure of the cannabinoid molecule," Ou, a pathologist, says, "would be all that is required to preserve the drug's useful purposes, while decreasing undesirable effects."

—Eric Mishara

"Jesus said love one another. He didn't say love the whole world."

—Mother Teresa

Relaxing may be hazardous to your mental health.

"We were relaxing a woman whom we had hooked up to an apparatus that measures heart rate, muscle temperature, and finger temperature," explains Dr. David Barlow, director of the Phobia and Anxiety Disorders Clinic of the State University of New York at Albany. "She was doing very nicely and beginning to relax. Then, much to our surprise, she had a massive panic attack: full-blown, unadulterated terror. Her heart rate doubled in a minute."

When a second patient had the same response, Barlow and colleagues looked back and found that sharply increased anxiety



Relaxation exercise: Lay back, tune in, freak out?

was often reported by clinicians as a side effect of relaxation therapy. Thomas Borkovec of Pennsylvania State University noted that as many as 54 percent of his patients reported anxiety during meditation; 30 percent

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VIP: 'Very important peptide' in AIDS?

Scientists at the National Institute of Mental Health (NIMH) in Bethesda, Md., recently found a small protein that blocks the AIDS-causing virus, known as human immunodeficiency virus (HIV), at receptor sites on critical T4 immune cells (SN: 12/20&27/86, p.388). The protein, dubbed Peptide T, was isolated from the HIV envelope protein and is being tested on Swedish and U.S. AIDS patients (SN: 6/13/87, p.376).

At a seminar last week, the NIMH investigators described evidence suggesting that Peptide T may protect brain and immune cells by mimicking a naturally occurring peptide — vasoactive intestinal peptide (VIP). The two peptides contain a similar "core" sequence of five amino acids, says one of the researchers, Candace B. Pert, and both appear to attach to T4 receptors in the brain.

In experiments directed by Douglas E. Brenneman, VIP and Peptide T similarly protected mouse neurons in laboratory cultures from dying after exposure to low concentrations of the HIV envelope protein. On their own, significant numbers of the neurons perished at the same concentrations. Three other peptides that act on the brain and are related to VIP offered no protection against the cell destruction inflicted by the AIDS virus, says Brenneman.

Preliminary work suggests that VIP acts at three T4 receptor subtypes, says NIMH's Joanna M. Hill. Peptide T may act at only one of those subtypes, she notes. Furthermore, there are numerous T4 receptors in the cerebellum and basal ganglia, brain structures implicated in the dementia and muscular disorders that often accompany AIDS.

"My working theory, which is still largely speculative," says Hill, "is that much of AIDS dementia and motor dysfunction is caused by HIV envelope protein binding to T4 receptors in the brain and preventing normal VIP functions."

A preliminary clinical trial of five patients in the early stages of AIDS injected with Peptide T for 30 days resulted in all the subjects reporting more energy, says Peter Bridge of NIMH. Skin diseases, such as psoriasis, subsided in three of the patients, as did persistent, watery diarrhea in one subject. But the ability to copy a complex geometric figure from memory was severely impaired in four of the patients, observes Bridge.

Peptide T's usefulness in treating AIDS, and particularly in reversing the loss of concentration and memory, remains unclear, he says. A trial of six patients treated with the protein and six given a placebo is now underway at the University of Southern California in Los Angeles. Subjects have been difficult to recruit, he adds, often because they are unwilling to give up other unconventional AIDS treatments during Peptide T trials.

Facelift for newborn imitation

Within days of birth, can a newborn infant imitate the facial expressions of an adult, such as a happy face, a sad face or a look of surprise? Several recent studies have suggested that newborns are indeed capable of this skill, but a report in the January *DEVELOPMENTAL PSYCHOLOGY* sounds a note of caution.

Marsha Kaitz of Hebrew University in Jerusalem and her colleagues say that 1- to 2-day-old babies often respond to facial expressions of an adult by opening their mouths or pouting their lips, but do not actually imitate the expressions. The 20 female and six male newborns in their sample were held by a female who modeled a happy, sad and surprised expression on separate trials. Two observers rated the newborns' facial responses. When the model stuck her tongue out, however, the infants usually did so as well. The researchers say this indicates that a motor response associated with breast feeding, such as protruding the tongue, can be triggered by an adult's expression, but voluntary imitation of emotional expressions is not within a newborn's repertoire.

Gold-filled discovery in transplants

Tissue transplantation may have a shining future — if gold proves to be as precious as recent research on neural transplants suggests. By filling envelopes made of viruses with colloidal gold and fusing them with nerve cells, scientists at the University of South Florida in Tampa have been able to track the migration of transplanted cells and measure their survival.

Used for years as a cell marker, the gelatin-like colloidal gold is easily distinguished by its yellow or bright white appearance through a microscope. Gary W. Arendash and his co-workers took advantage of gold's shining qualities and devised a model system applicable to transplantation science. As reported in the Feb. 5 *SCIENCE*, the researchers used a known technique to introduce the gold into cells: They mixed gold with a solution of harmless Sendai viruses that had been broken apart by a detergent. Pieces of the viral envelopes spontaneously re-grouped as detergent was removed, forming whole envelopes that contained the gold colloid. Made from a virus that avidly fuses to vertebrate cells, the gold-filled Sendai virus envelopes attached to neural cells that were later transplanted into rats.

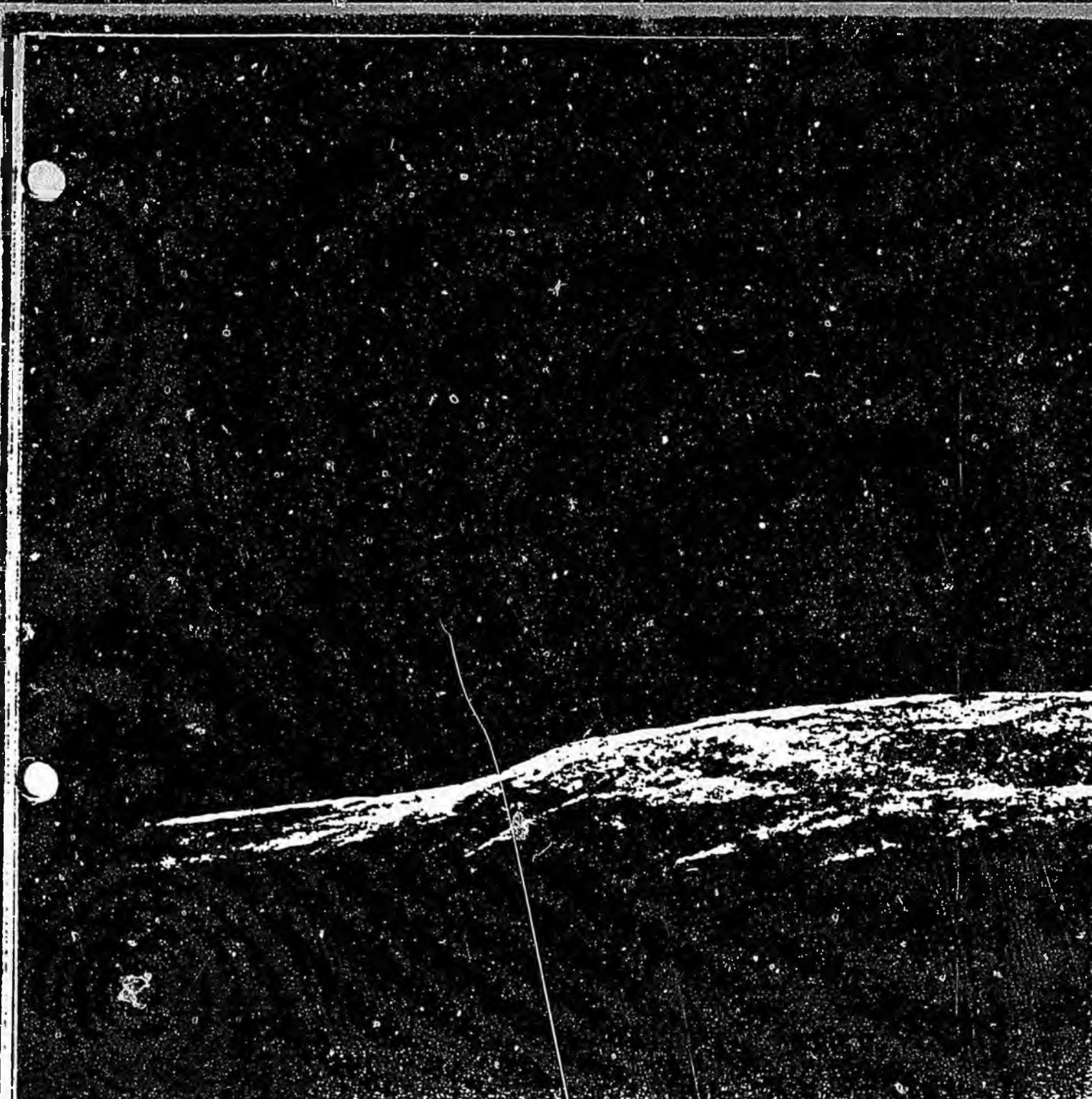
By scanning transplanted tissue for signs of gold, the scientists were able to follow the migration of transplanted cells through areas of the rats' brains, and to determine that the transplanted cells survived at least three months. Both location and viability are crucial to understanding the fate of nerve-tissue transplants, which have attracted attention and controversy as potential treatments for conditions like Parkinson's disease (SN: 11/28/87, p.341). Arendash said in an interview that it should be possible to similarly label other types of cells used for transplants, and that the gold/Sendai system might settle the debate over whether adrenal cells transplanted into the brain for treating Parkinson's actually survive, or instead release nerve-cell-stimulating factors before their death. Although tissue must be removed when the colloidal gold technique is used, the scientists are now evaluating another marker that is already being used in clinical imaging techniques and that might be engulfed by reforming Sendai virus envelopes — thus providing a way to follow grafts *in vivo*.

Lungs hit harder by pot than by cigarettes

Taking a puff from a marijuana cigarette carries more punch than previously thought, according to study results released last week by the University of California at Los Angeles. By measuring carbon monoxide in the blood and inhaled tar in the lungs of men who had smoked tobacco or marijuana cigarettes, researchers found that a single marijuana cigarette may be as unhealthy as smoking five cigarettes made of tobacco.

In research published last year, the same scientists had concluded that habitual smoking of three or four marijuana cigarettes a day caused the same amount of bronchitis symptoms and lung-cell damage as smoking more than 20 tobacco cigarettes daily. The group reports its more recent findings in the Feb. 11 *NEW ENGLAND JOURNAL OF MEDICINE*.

Included in the study were 15 men who had smoked both marijuana and tobacco for at least five years. Measurements were taken after they had smoked one or the other type of cigarette, as well as after they had smoked marijuana from which the active ingredient THC had been removed. Carbon monoxide levels, which have been associated with coronary heart disease, were nearly five times higher after marijuana smoking than after tobacco smoking. Marijuana smoking also resulted in three times the amount of tar inhaled and one-third more tar retained in the lungs and respiratory tract. The presence or absence of THC had minimal effects on test results, say the scientists, who attribute the differences to the way marijuana is inhaled more deeply and held in the lungs.



...the most popular
...perhaps least understood illegal
psychoactive substance.

So far, studies of pot's health effects suggest what many who've smoked it would predict: For most people, occasional use probably isn't particularly harmful. Heavy use over long periods is likelier to be dangerous, although

...the most at risk include young people, pregnant and nursing women, heart patients and the emotionally unstable. Harvard psychiatrist and drug researcher Norman Zimberg summarizes the inadequate and conflicting data this way: "Nothing's been proved, but there's reason to worry."

There's a pressing reason to learn more about marijuana's effects: The pot on the street has increased in

...many of the most densely populated areas. In some parts of America, home-grown marijuana has become a multi-billion-dollar-a-year agribusiness. These knowledgeable farmers use sophisticated technologies like hydroponics to cultivate pot powerful enough to command astronomical prices—more than \$100 an ounce in big cities.

Recent studies show there are plenty of customers, though not quite as many as there used to be. Pot

Pot mellowed the
hippies, but can make
yuppies uptight.

Signs of Trouble

"There are no simple signs that a person has a serious problem with marijuana, but there are some common patterns," says Dr. Robert Millman, of the New York Hospital-Payne Whitney Clinic. "An interaction of the drug, the person and the environment is usually involved." According to the American Psychiatric Association, 4% of adults in this country suffer from "cannabis dependence" at some time in their lives.

Doctors stress that it can be very difficult to distinguish whether a pot problem is a symptom or a cause. The problem is that users in trouble often have pre-existing personality or mood disorders, which are aggravated by

the drug. However, indications of a dependence on marijuana include:

- A pattern of daily or almost daily use, usually developed over a long period. Chronic heavy users generally increase the frequency of smoking over time, rather than the dose. But they also find, with long-term use, that they eventually get less pleasure from smoking.
- Impaired ability to function socially or on the job.
- Use of other drugs together with marijuana.
- Lethargy.
- Anhedonia—the inability to feel pleasure.
- Attention and memory problems.

more than 400 chemicals of the Cannabis sativa plant, especially the 60 or so that are unique to it—the cannabinoids (see "Medical Benefits?" p.96). Some of these may contribute only minimally to the "high," but THC (delta-9-tetrahydrocannabinol) produces most of the psychoactive effects. While the potency of street drugs varies greatly, the average concentration of THC by weight has increased from about 1% or less in the '60s and '70s to anywhere from 4% to 10% in the '80s.

When marijuana is smoked, THC enters the lungs, passes into the blood stream and is carried to the brain in minutes. Both THC and its chemical by-products dissolve in fatty tissue—such as the brain, the adrenals, the gonads and the placenta—and remain there for three or more days. (These chemicals can be detected in the urine of frequent smokers for four weeks or more.) It's worrisome that these compounds lin-

ger in the body and accumulate with repeated smoking, but there's no evidence yet that they cause harm.

In the brain itself, according to Dr. Billy Martin, a professor of pharmacology at the Medical College of Virginia in Richmond, THC seems to turn on a number of biochemical systems. In low concentrations it may cause two or three changes; in stronger doses, 10 or 12. Says Martin: "The high is probably a combination of effects—sedation, euphoria and perceptual alterations—each caused by a separate mechanism." He thinks that molecules of THC produce their effects by fitting into special receptor cells in the brain, like keys in locks. If Martin and his colleagues could prove the existence of the receptors, their discovery would suggest that a THC-like biochemical occurs naturally—the body's own version of marijuana. "Such a substance could serve in the maintenance of mental health," Martin says, "per-

haps by helping the individual to calm down or protect himself against stress."

High Anxiety

During the marijuana high, which lasts for two to four hours after smoking, users often experience relaxation and altered perception of sights, sounds and tastes. One of pot's commonest side effects is the "munchies"—a craving for snacks, especially sugary ones. Participants in a study at Johns Hopkins ate more snacks—and consumed more calories per day—while they had access to marijuana in a social situation.

The high can be subtle and somewhat controllable, and intoxicated users can seem sober to themselves and others. But this *feeling* of sobriety is one of pot's greatest risks to well-being. Hours after the sensation of being stoned is over, the drug can still impair psychomotor performance.

The user's coordination, visual perceptions, reaction time and vigilance are reduced, which can make it dangerous to drive, fly or operate machinery. In a study done at Stanford University, simulated tests of pilots' skills showed they were affected for up to 24 hours after smoking, although they felt sober and competent. Another California study showed that a third of the drivers in fatal car crashes had been smoking marijuana. Driving under the influence of pot may be especially dangerous, because the driver may not know when his ability to function is askew.

Short-term memory and learning ability are also curtailed for hours after smoking. This delayed effect could be a serious problem for students, especially frequent smokers. Because the

*Marijuana may have
some medical uses, but
it's no wonder drug.*

Medical Benefits?

Marijuana can be a useful medicine, but it's no wonder drug. People have used it for 5,000 years to assuage a variety of complaints, most recently in the effort to help treat glaucoma, asthma, spasticity, seizures and certain other nervous system irregularities, as well as the nausea that accompanies chemotherapy. In fact, doctors can now legally prescribe THC, pot's most active ingredient—usually in a capsule marketed as Marinol—for chemo patients.

However, marijuana has not proved itself to be superior to other drugs for most patients. So far, it's just an alternative that may work better for certain people. Many scientists doubt it will ever be a truly significant addition to the pharmacopeia. Its action is neither

potent nor focused enough to produce the predictable, clear, isolated effects of first-class drugs. Moreover, the intoxication it causes often makes THC medication undesirable.

On the other hand, marijuana does have limited but documented medical potential. With further research, its components could be teased apart. Those that produce the desired effects—say, the suppression of vomiting or relaxation of muscles—could be isolated, and the rest, causing euphoria and sedation, could be eliminated. Its remedial action is sometimes different from that of standard drugs, which could point pharmacologists to new research directions—one reason scientists are dismayed over the reduction of research funds.

duration and extent of marijuana's psychomotor effects are not known for sure, the practice of testing urine to determine workers' competence is very controversial. "For the first two to four hours, say, on a Saturday night, the drug decreases one's ability to think, drive and work," says Dr. Reese Jones, a drug researcher and professor of psychiatry at the University of California, San Francisco. "But it's yet to be determined if those effects are still present on Monday morning."

Dr. Robert Millman, director of the alcohol and drug abuse service of the New York Hospital-Payne Whitney Clinic, agrees. "Most of the urine screenings that test positive for drugs pick up signs of pot—a very widely used drug," he says. "Companies are confused about what to do—should they fire everybody?"

Evaluating marijuana's impact on

mental ability is difficult, but gauging its effects on emotional health is even more so. Responses are subjective and unpredictable. Marijuana is often associated with a feeling of mellowness, but it causes anxiety as well. It might make one user drowsy, and another—or the same user on a different occasion—hyperactive. One smoker becomes chatty, another withdrawn.

The strength of the drug, frequency of use, and physiological differences among users—for example, in body size and neural sensitivity to the drug—help account for the wide range of reactions. "About a third of people who smoke it feel no effects, a third feel ill and a third feel high," says Dr. Renaud Trouvé, a drug researcher and assistant professor of anesthesiology at Columbia-Presbyterian Medical School in New York.

What Timothy Leary and others called "set and setting"—the mental

state of the user and the environment in which the drug is taken—also plays a part in emotional reactions to marijuana. According to Millman, many people now in middle age found smoking pot relaxing as youths within the laid-back '60s counterculture. As they've increased in age, power and responsibility, they've tuned out, turned off and dropped in.

"There's a natural history to marijuana use," he says. "The baby boomers have acquired a sense of their vulnerability and of the finiteness of time—"This is my life we're talking about!" he says. "Feeling lethargic and giving up control make them anxious now."

That fear of losing control, or even one's mind, can induce paranoia and anxiety—pot's commonest unpleasant side effects—in people who would not have had these problems if they hadn't taken the drug, according to Millman. Moreover, he says, "marijuana can open a door to psychosis in predisposed persons similar to the action of many hallucinogens like LSD." Many doctors suspect that in these rare instances of users losing touch with reality, the drug has simply activated a latent psychiatric problem. Because of marijuana's potential for stirring up the psyche, psychiatrists say those with pre-existing disorders should stay away from it.

However, after Harvard's Dr. Norman Zinberg, author of *Drug, Set, and Setting* (Yale University Press, \$10.95), studied a group of marijuana smokers, he concluded that "essentially, marijuana doesn't cause psychological problems for the occasional user." Many of his colleagues agree. Most of Zinberg's subjects described the drug as not particularly deleterious to normal functioning, and difficult

(though not impossible) to abuse; they tended to restrict smoking to leisure time and special occasions, often planned around food.

Deadheads & Other Potheads

The researchers' consensus on long-term heavy marijuana smokers is bleaker, although hard data are more elusive than those on the drug's acute effects. For the vast majority of users, pot isn't physically addictive. It ranks far below drugs such as cocaine and heroin—or alcohol and tobacco—in inviting compulsive use. Nonetheless, a significant number of smokers use the drug frequently, often daily. Such regular use is one of the most obvious

signs of a serious marijuana problem; heavy daily smokers are usually at least a bit out of it (see "Signs of Trouble," p. 94).

Being out of it is less noticeable in the countries where the three large field studies of chronic users were conducted than in the fast-paced United States. Marijuana is widely accepted in Jamaica and Costa Rica, and within certain subcultures in Greece. These studies found that pot smokers were by and large as healthy—and functioned as well—as nonsmokers. However, although these surveys didn't prove any major, permanent health consequences of long-term pot use, that doesn't mean there aren't any. Researchers caution that the sub-

jects of these studies were mostly poorly educated, working-class adults who have lower standards for productivity and health than middle-class Americans. And it took decades, not years, to determine the serious risks now known to be associated with alcohol and tobacco.

For those who look on pot as a buffer against stress, so-called "self-medication" can be dangerous: The person who smokes in an effort to "treat" his depression, anxiety or personality quirks may only add to his trouble. The psychological problem most often associated with chronic marijuana smoking is the "amotivational syndrome." Those thought to have it—many of them teens and

Others give you more cholesterol.



10 mg
cholesterol
per serving



12 mg
cholesterol
per serving



10 mg
cholesterol
per serving

*Some teens smoke
to give themselves an
excuse for failure.*

young adults—show diminished goal-orientation, passivity and an inability to master new problems. However, the syndrome poses a chicken-or-egg question: Does heavy pot use cause poor motivation, or vice versa?

New York Hospital's Millman prefers the term "aberrant motivation" to describe the inert attitude of some heavy smokers. "When parents arrive at my office with a son in a ponytail and a tie-dyed shirt, they don't have to say a word. The kid is abusing drugs and doing badly in school and at home—but somehow he can get himself to a Grateful Dead concert in Ohio with \$7 in his pocket. He doesn't lack motivation, he's just focusing it in the wrong direction."

Millman, who thinks such flawed motivation is caused by the combination of pot and pre-existing psychological problems, has found that some adolescents smoke grass not only to escape from their troubles, but to explain them. Such self-handicapping protects their egos against feelings of failure. "Many of the kids I see have made pot smoking the rationalization for psychopathology—they and their peers can say they act weird because of dope, rather than because they have an untreated learning disability or an emotional disorder," he says.

Children and teenagers are endangered by any drug, because their bodies and minds—especially their judgment—are immature. A study of

middle-class adolescents dependent on marijuana, reported in the May 1987 issue of the journal *Clinical Pediatrics*, helped identify those who may be at highest risk from the drug. Many were learning-disabled, had family histories of alcoholism, and personal and academic problems. Their parents and in some cases therapists hadn't suspected their pot smoking for a year after they started, perhaps because other problems may have disguised the drug use.

The connection between pot, poor motivation and learning disabilities is particularly troubling in an era when 28% of students drop out of high school. The sedation, skewed psychomotor functioning and involvement

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Marijuana has more carcinogens than tobacco does.

with other drugs and drug-abusing peers associated with marijuana make any use by teens unwise. A kid who tries pot also has an estimated 10% risk of becoming a daily smoker—and frequent use, at this age, can become truly disastrous.

Revvng Up the Heart

Proof of the physical risks of marijuana is as elusive as proof of its dangers to the mind. The lack of comprehensive long-term human studies and the limits of animal research frustrate scientists like Renaud Trouvé. He's convinced that marijuana stresses the heart, lungs and immune and endocrine systems, particularly when it's used frequently. "As for the short-term physiological effects of marijuana, one can believe what is written," he says. "As for the long-term effects, we just don't know."

For example, it seems reasonable that pot smoking would be bad for the lungs. Marijuana contains more tar and carcinogens than tobacco and is inhaled longer and harder. But while heavy users do show a measurable airway obstruction and seem more prone to bronchitis and sinusitis, no links to serious lung diseases like cancer or emphysema have been established. In fact, perhaps the worst threat to the lungs of pot smokers is the herbicide paraquat, which was sprayed widely on marijuana fields, especially in Mexico. The use of the chemical, which can cause severe lung damage, has been discontinued, although it's being considered as a way to deter growers in California and Hawaii.

The effects of marijuana on the reproductive system also seem ominous, but remain unproved. The drug temporarily lowers the level of the sex

American Health March '88

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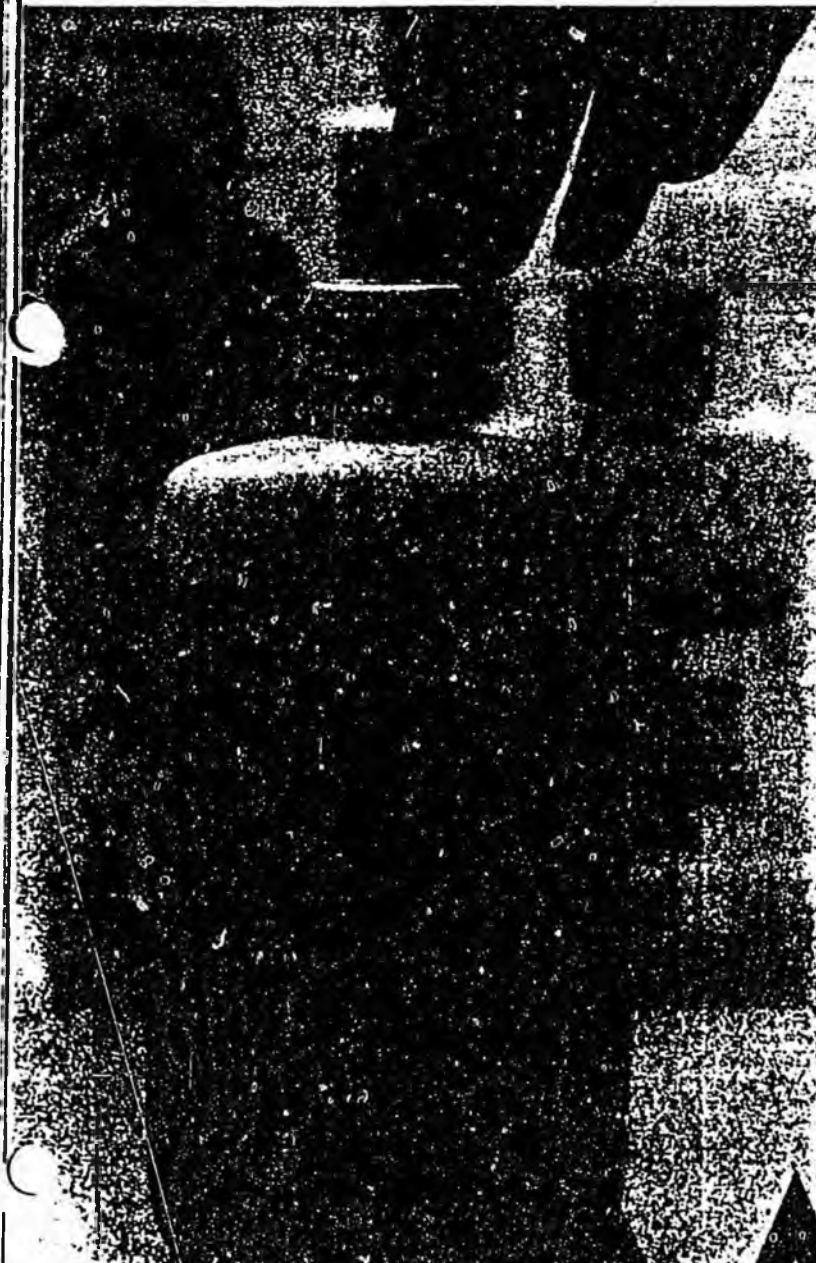
*Pot can change sex
hormone levels, for men
and for women both.*

hormone testosterone in men, and decreases the number, quality and motility of sperm, but the impact on fertility is unknown. However, testosterone also helps govern puberty's changes in boys. Some researchers think that low levels of the hormone could impair adolescent development.

Women who smoke heavily may experience menstrual irregularities, including a failure to ovulate. When pregnant monkeys, rats or mice are exposed to heavy doses of pot, their offspring are more likely to have a low birth weight or to be stillborn. There's no clear proof that marijuana causes

birth defects, but doctors urge pregnant and nursing women to treat pot with the same caution they give to alcohol and tobacco.

Similarly grim but inconclusive observations suggest that marijuana use can adversely affect other organs and systems in the body. Some research-



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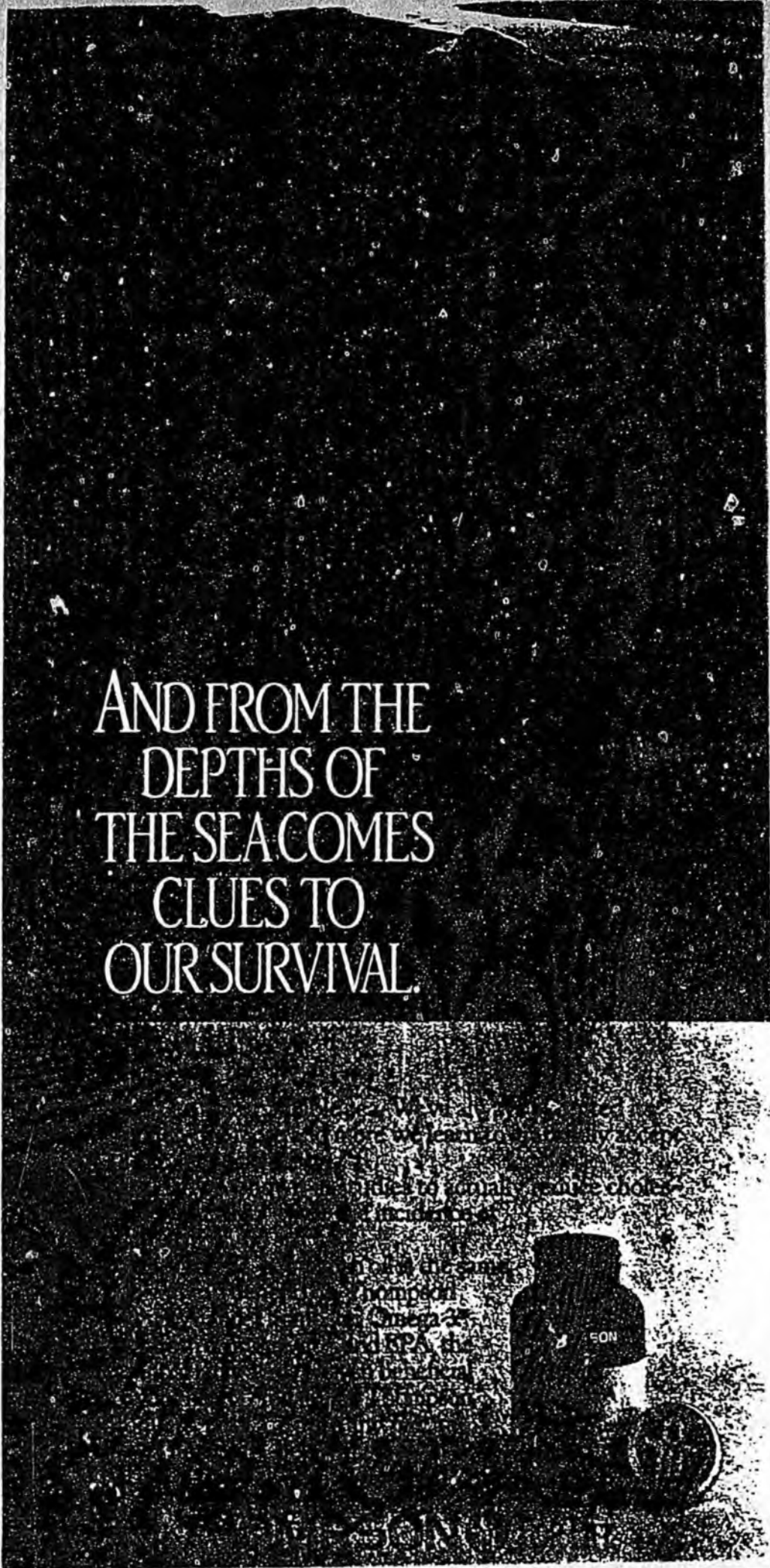
ers have found that marijuana can cause microscopic brain-cell damage in monkeys—but human brain damage hasn't been shown. Some studies suggest that marijuana can suppress immune function to some extent, but scientists don't yet know whether that degree of dysfunction affects health. What's more, marijuana increases the heart rate by as much as 90 beats per minute. This added workload could be very dangerous for those with cardiovascular disorders such as angina, but there's no evidence that it causes any permanent harm to healthy hearts.

Toward a Sound Pot Policy

What state-of-the-art marijuana research tells experts is that we need to know more. In 1982, the Institute of Medicine published "Marijuana and Health," a 188-page report based on solid research and compiled by a committee of 21 scientists. Its conclusion, echoed by many marijuana researchers today: "Marijuana has a broad range of psychological and biological effects, some of which, at least under certain conditions, are harmful to human health. Unfortunately, the available information does not tell us how serious this risk may be."

The uncertainty that surrounds marijuana use is compounded when it's compared to the nation's other drugs—both legal and illegal. Despite increasing decriminalization and public tolerance of pot, half of all drug arrests made by local police in 1985—almost 500,000—involved marijuana, according to *The New York Times*. Many citizens consider this police enforcement an inappropriate use of resources that could be used to fight the greater menace of deadly drugs like heroin and cocaine—or, for that matter, tobacco

American Health, March '88



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*We need more money
for basic research, not
for drug testing.*

and alcohol, which cause hundreds of thousands of deaths each year.

It's unlikely that either of these two legal, lethal drugs would be lawful if they were discovered today. "The light use of marijuana is certainly not as bad for you physically as alcohol or tobacco," says Harvard's Zinberg. "Our drug policy is based on morals, not on health considerations. The person with a drink in his hand says to himself, 'I'm bad enough, but that guy smoking pot over there is worse.'"

Zinberg says the best approach toward a sound policy on marijuana would be continued decriminalization accompanied by 15 years of serious long-term research. By then, the public would have enough information to make personal choices and public policy decisions. Reese Jones believes that, regardless of policy changes, marijuana's popularity may gradually die out as the group of heavy users ages.

The one point on which all those concerned with marijuana agree is that having so little knowledge of the drug is a dangerous thing. Despite its prevalence and the unanswered questions about its use, federal support for marijuana research, still in its infancy, has decreased—diverted to less-used but "hotter" drugs like cocaine. "I'm a researcher with conservative views on drug use who hasn't found the hard data on the health effects of marijuana," says Jones. "There's a lot of uncertainty about it—you can't say it's unsafe, but there's no proof it's benign, either. We should be studying it to find out, but all the research money is going to help figure out how to detect it in people's urine instead." ♥

Winifred Gallagher is a Senior Editor of American Health.

American Health March '88

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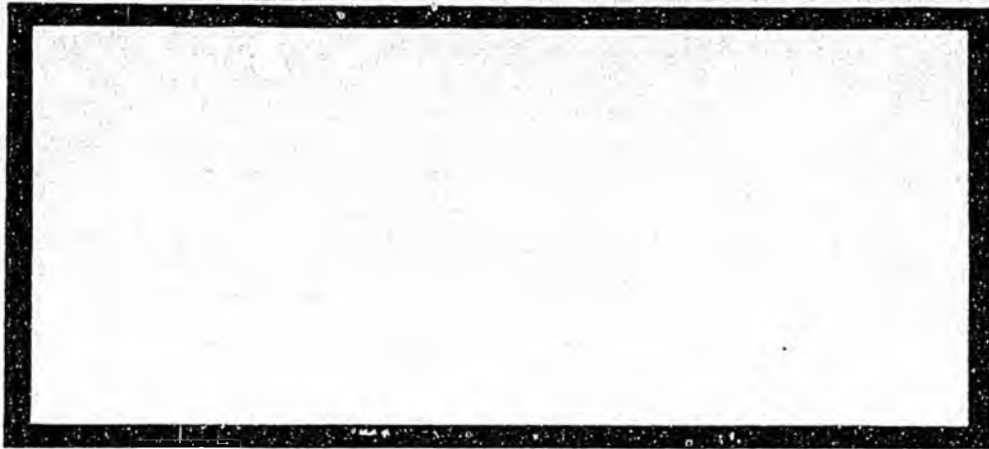
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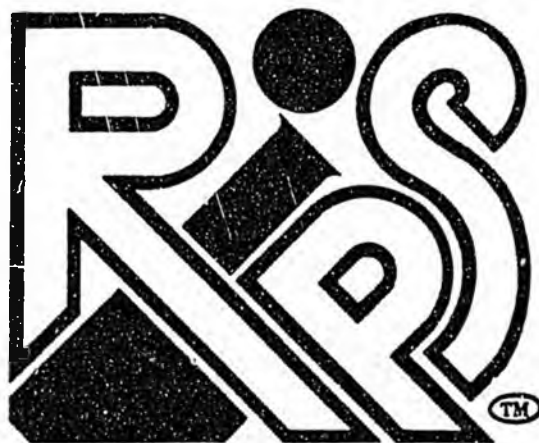
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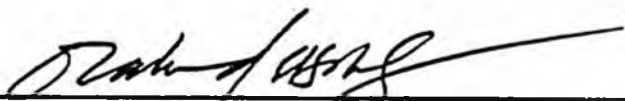


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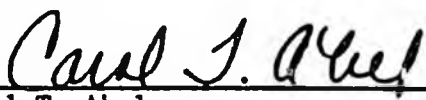
QUARTERLY REPORT
POTENCY MONITORING PROJECT

REPORT #28

October 1, 1988 - December 31, 1988



Mahmoud A. ElSohly, Ph.D
NIDA Marijuana Project Director
Research Institute of Pharmaceutical Sciences
School of Pharmacy
University of Mississippi
University, MS 38677



Carol T. Abel
NIDA Marijuana Project
Laboratory Supervisor
Research Institute of Pharmaceutical Sciences
University of Mississippi
University, MS 38677

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SUMMARY

As of December 31, 1988, the Project has analyzed and compiled data on 10464 Marijuana, 737 Hashish and 275 Hash Oil samples. Thirty-five percent of the marijuana samples are from domestic seizures representing 48 states.

The highest concentration of Delta-9-THC found in a marijuana sample is 18.83% from a 1986 domestic seizure in the state of Washington. From this quarter, the highest concentration of THC was 17.64% from a 1988 seizure from Roane, West Virginia.

During this report period, samples from all DEA regional laboratories were analyzed with normalized THC concentrations ranging from 1.60% THC to 4.10% THC from SERL and WRL respectively.

Normalized and non-normalized THC concentrations decreased from 1984 through 1986. However, the % THC increased in 1987 and appears to be rising. This is also the trend for Domestic Cannabis.

INTRODUCTION

As of December 31, 1988, samples from 11476 seizures of marijuana, hashish and hash oil have been analyzed. Of these 10464 were marijuana, 737 were hashish and 275 were hash oil. Composite analytical data on these samples show the following:

% by Dry Weight of Δ^9 -THC in all Samples analyzed by the Project as of December 31, 1988

	<u># Of Samples Analyzed</u>	<u>Arithmetic Average</u>	<u>Highest Concentration</u>	<u>Lowest Concentration</u>
Marijuana	10464	2.68	18.83	Trace*
Hashish	737	3.00	27.69	Trace
Hashish Oil	275	17.01	43.18**	0.04

For this report period October 1, 1988 through December 31, 1988, samples from 512 seizures have been analyzed -- 504 marijuana, 7 hashish, and 1 hash oil.

Composite analytical data on the samples analyzed during this quarter is as follows:

% by Dry Weight of Δ^9 -THC in samples analyzed between October 1, 1988 to December 31, 1988

	<u>Arithmetic Average</u>	<u>Highest Concentration</u>	<u>Lowest Concentration</u>
Marijuana	3.19	17.64	0.05
Hashish	4.82	18.64	0.06
Hashish Oil	5.25	5.25	5.25

*Less than 0.0095%

**Highest hash oil analyzed as confiscated material

Cannabis plant material, categorized by physical description of the samples, showing the high and low Δ^9 -THC concentration is as follows:

% by Dry Weight of Δ^9 -THC in all Samples analyzed by the Project as of December 31, 1988

	<u># Of Samples Analyzed</u>	<u>Arithmetic Average</u>	<u>Highest Concentration</u>	<u>Lowest Concentration</u>
Loose Plant Material	8251	2.42	13.56	Trace*
Kilobricks	1036	1.80	7.65	0.03
Buds	797	4.52	14.97	0.16
Sinsemilla	343	7.17	18.83	0.19
Thai Sticks	37	3.84	8.92	0.05

% by Dry Weight of Δ^9 -THC in samples analyzed between October 1, 1988 to December 31, 1988

	<u># Of Samples Analyzed</u>	<u>Arithmetic Average</u>	<u>Highest Concentration</u>	<u>Lowest Concentration</u>
Loose Plant Material	385	2.44	9.70	0.08
Kilobricks	30	2.93	5.21	0.43
Buds	41	4.27	9.91	0.40
Sinsemilla	48	8.14	17.64	2.93
Thai Sticks	0	0	0	0

*Less than 0.0095%

Δ^9 -THC concentrations by year confiscated are shown in Table 2.

Table 1. Normalized versus Non-normalized Cannabinoid Averages of Illicit Cannabis Samples by Year Seized

NORMALIZED

<u>Year</u>	<u>No. Of Seizures</u>	<u>% Δ^9-THC</u>	<u>% CBD</u>	<u>% CBC</u>	<u>% CBN</u>	<u>Kilograms</u>
74	113	0.36	0.00	0.08	0.44	18013.328
75	150	0.48	0.00	0.09	1.17	67159.536
76	210	0.98	0.00	0.12	0.62	101190.992
77	251	1.76	0.00	0.10	0.74	173611.056
78	132	1.72	0.01	0.12	1.27	154532.064
79	221	1.53	0.02	0.12	1.40	71859.168
80	153	1.96	0.01	0.16	0.69	44094.656
81	250	2.11	0.02	0.18	0.98	147438.416
82	482	3.34	0.11	0.17	0.74	299883.264
83	1227	3.44	0.02	0.16	0.54	776255.744
84	1118	3.96	0.07	0.13	0.47	1258949.630
85	1613	2.63	0.14	0.09	0.52	729123.584
86	1554	2.24	0.06	0.11	0.44	669372.672
87	1691	2.23	0.23	0.11	0.33	620787.712
88	1165	3.01	0.09	0.15	0.50	120803.104

NON-NORMALIZED AVERAGES

<u>Year</u>	<u>No. Of Seizures</u>	<u>% Δ^9-THC</u>	<u>% CBD</u>	<u>% CBC</u>	<u>% CBN</u>
74	113	0.89	0.03	0.08	0.49
75	150	0.71	0.03	0.10	0.55
76	210	0.72	0.00	0.09	0.37
77	251	0.91	0.08	0.10	0.43
78	132	1.37	0.01	0.12	0.67
79	221	1.67	0.02	0.12	0.24
80	153	2.06	0.10	0.14	0.47
81	250	2.37	0.36	0.16	0.38
82	482	3.05	0.34	0.19	0.33
83	1227	3.23	0.22	0.17	0.30
84	1118	3.29	0.24	0.17	0.34
85	1613	2.82	0.28	0.14	0.23
86	1554	2.30	0.29	0.15	0.21
87	1691	2.93	0.30	0.17	0.30
88	1165	3.16	0.25	0.15	0.31

Table 2. Comparison of Non-normalized Δ^9 -THC Concentrations in Different Forms by Year Confiscated 1974 - 1988*

<u>Year</u>	<u>Loose Plant Material</u>	<u>Kilobrick</u>	<u>Buds</u>	<u>Sinsemilla</u>	<u>Thai Sticks</u>	<u>Hashish</u>	<u>Hash Oil</u>
74	1.34	0.04	--**	--**	0.54	0.86	15.88
75	1.03	0.47	1.34	--**	--**	2.31	13.09
76	1.87	0.54	3.03	--**	--**	3.28	18.82
77	1.27	0.53	1.38	3.20	4.91	1.81	18.89
78	1.47	0.96	2.11	6.28	0.49	2.51	21.31
79	1.57	0.79	3.03	3.66	0.13	2.32	20.91
80	1.02	0.63	3.81	6.40	0.05	2.58	16.56
81	1.48	0.78	3.52	6.38	--**	3.13	17.45
82	2.63	--**	5.14	7.10	4.60	2.69	19.88
83	2.94	--**	4.99	7.47	4.17	5.47	21.36
84	2.91	4.07	4.37	6.67	5.71	5.75	16.75
85	2.44	3.80	4.88	7.28	6.26	6.49	15.08
86	1.96	2.98	5.09	8.44	4.22	2.63	16.51
87	2.59	3.32	4.47	7.97	4.45	2.62	13.36
88	2.66	3.42	4.82	8.43	3.36	3.32	7.41

* All figures are given as percent by dry weight.

** No samples analyzed which were confiscated in this year.

The above averages are not normalized by weight of seizure, but are simple arithmetic means calculated by dividing the sum of the Δ^9 -THC concentrations of each form by the number of seizures of that form. These figures should be more useful in spotting trends than the normalized averages. The normalized averages (as found in Table 5) should give a better representation of what was on the street in the given years.

Figure 1: Normalized & Non-normalized THC% versus Year of Confiscation

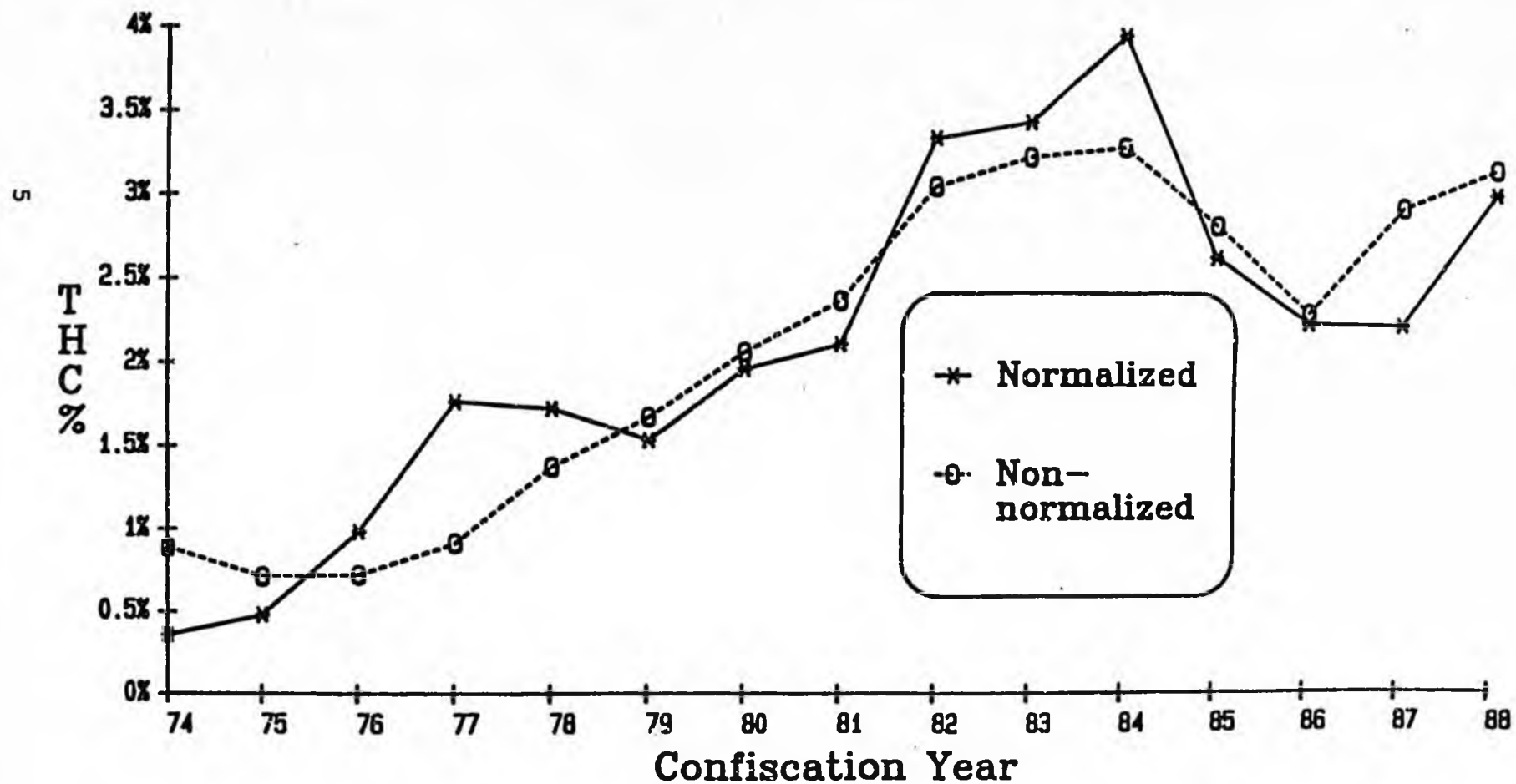


Table 3. Normalized Δ^9 -THC Averages* of Illicit Cannabis Samples Analyzed through December 31, 1988 by Year Seized and Description

YR	BD	KB	MH	SM	TS	YR/TOTAL
70	3.03(1)	0.45(182)	1.60(27)	0.00(0)	0.00(0)	0.98(210)
77	0.53(7)	0.47(165)	2.28(53)	4.25(15)	4.91(1)	1.76(251)
78	2.44(25)	1.84(60)	1.52(43)	6.28(11)	8.40(3)	1.72(132)
79	3.35(11)	1.26(18)	0.55(181)	3.52(10)	0.13(1)	1.53(221)
80	4.26(6)	0.91(5)	0.65(114)	3.00(27)	0.05(1)	1.96(153)
81	4.46(33)	0.81(3)	1.64(142)	4.10(32)	0.00(0)	2.11(250)
82	2.91(50)	0.00(0)	3.36(410)	4.64(14)	5.33(8)	3.34(482)
83	3.90(126)	0.00(0)	5.43(1076)	5.62(18)	5.19(7)	3.44(1227)
84	4.53(178)	3.84(22)	3.72(874)	5.56(36)	7.63(3)	3.76(1118)
85	5.25(106)	4.43(73)	2.50(1381)	6.48(52)	6.26(1)	2.63(1613)
86	3.58(68)	3.94(97)	2.21(1391)	10.62(32)	3.56(6)	2.24(1554)
87	4.37(109)	2.67(194)	1.95(1345)	5.84(40)	3.62(3)	2.23(1691)
88	6.00(61)	3.83(71)	2.87(951)	6.25(60)	2.11(2)	3.01(1165)

**	4.25(787)	1.66(1036)	2.74(8246)	5.86(338)	5.64(37)	2.86(10464)

Description Key:

Description; code for the physical description of samples as follows:

- MH - Marijuana; marijuana in the form of loose Cannabis plant material with leaves, stems and seeds; includes cigarettes and those samples which cannot be described otherwise.
- KB - Kilobrick; marijuana compressed into the form of a kilobrick (classical Mexican packaging); has leaves, stems and seeds.
- BD - Buds; marijuana in the form of buds of flowering tops of the Cannabis plant with seeds.
- SM - Sinsemilla; marijuana in the form of Sinsemilla; i.e., flowering tops of the female Cannabis plant with no seeds.
- TS - Thai Sticks; marijuana in the form of Thai Sticks, leafy material tied around a small stem.

* All figures are given as percent by dry weight.

** Averages include 132 samples analyzed which were seized prior to 1974. The number in parentheses indicated the number of samples analyzed.

Table 4. Normalized Δ^9 -THC Averages* of Illicit Cannabis Samples Analyzed through December 31, 1988 by Year Seized and Source

YR	FG	PD	PM	PS	ST	YR/TOTAL
76	2.46(5)	0.00(0)	0.98(205)	0.00(0)	0.00(0)	0.98(210)
77	0.78(4)	0.42(1)	1.76(241)	2.06(21)	1.32(3)	1.76(251)
78	0.78(5)	0.74(1)	1.72(109)	4.85(17)	0.00(0)	1.72(132)
79	1.76(102)	3.76(3)	1.53(44)	4.27(6)	0.31(2)	1.53(221)
80	5.11(31)	1.71(21)	1.46(77)	2.25(13)	0.46(11)	1.96(153)
81	1.79(1)	0.46(6)	2.14(177)	1.64(16)	0.52(50)	2.11(250)
82	0.00(0)	2.21(130)	3.60(226)	0.00(0)	1.63(126)	3.34(482)
83	0.00(0)	1.41(13)	3.46(824)	0.00(0)	1.89(390)	3.44(1227)
84	0.00(0)	0.00(0)	4.07(757)	0.00(0)	1.41(33)	3.98(1118)
85	0.00(0)	0.00(0)	2.80(770)	0.00(0)	1.10(843)	2.63(1613)
86	0.00(0)	0.00(0)	2.38(752)	0.00(0)	1.64(802)	2.24(1554)
87	0.00(0)	0.00(0)	2.34(1143)	0.00(0)	1.98(548)	2.23(1691)
88	0.00(0)	0.00(0)	3.00(733)	0.00(0)	4.50(432)	3.01(1165)

**	1.79(290)	0.87(207)	2.98(6334)	3.69(54)	1.67(3579)	2.86(10464)

Source:

- PM - Potency Monitoring; designates those samples received through the DEA under the scope of the Potency Monitoring Program.
- PS - Psychiatric; received through a psychiatrist or other MD from a patient having psychiatric or medical problems related to marijuana use.
- PD - Police Department; designates those samples received from police department; e.g., samples received from the Gulfport, Miss., police chief would be classified as PD; place seized would be Gulfport, Miss.
- ST - State Crime Labs; designates those samples received from state crime labs or other state agencies. In the overall printout, samples received from state agencies will be classified by the state's 2- letter abbreviation as used by the U.S. Postal Service.
- FG - Fugitive; designates samples received when no arrests were made.

* All figures are given as percent by dry weight.
 ** Averages include 132 samples analyzed which were seized prior to 1974. The number in parentheses indicates the number of samples analyzed.

Table 5. Domestic Cultivation*

Cannabis Samples Analyzed through December 31, 1988

0.0%	OF	113	SAMPLES	SEIZED	IN	1974	WAS	KNOWN	TO	BE	DOMESTIC.
0.0%	OF	150	SAMPLES	SEIZED	IN	1975	WAS	KNOWN	TO	BE	DOMESTIC.
0.0%	OF	210	SAMPLES	SEIZED	IN	1976	WAS	KNOWN	TO	BE	DOMESTIC.
0.4%	OF	251	SAMPLES	SEIZED	IN	1977	WAS	KNOWN	TO	BE	DOMESTIC.
9.1%	OF	137	SAMPLES	SEIZED	IN	1978	WAS	KNOWN	TO	BE	DOMESTIC.
6.5%	OF	221	SAMPLES	SEIZED	IN	1979	WAS	KNOWN	TO	BE	DOMESTIC.
22.9%	OF	153	SAMPLES	SEIZED	IN	1980	WAS	KNOWN	TO	BE	DOMESTIC.
51.0%	OF	250	SAMPLES	SEIZED	IN	1981	WAS	KNOWN	TO	BE	DOMESTIC.
29.0%	OF	482	SAMPLES	SEIZED	IN	1982	WAS	KNOWN	TO	BE	DOMESTIC.
31.5%	OF	1227	SAMPLES	SEIZED	IN	1983	WAS	KNOWN	TO	BE	DOMESTIC.
29.6%	OF	1118	SAMPLES	SEIZED	IN	1984	WAS	KNOWN	TO	BE	DOMESTIC.
52.2%	OF	1613	SAMPLES	SEIZED	IN	1985	WAS	KNOWN	TO	BE	DOMESTIC.
51.2%	OF	1554	SAMPLES	SEIZED	IN	1986	WAS	KNOWN	TO	BE	DOMESTIC.
32.0%	OF	1691	SAMPLES	SEIZED	IN	1987	WAS	KNOWN	TO	BE	DOMESTIC.
35.4%	OF	1165	SAMPLES	SEIZED	IN	1988	WAS	KNOWN	TO	BE	DOMESTIC.

** 35.2% OF A TOTAL OF 10464 SAMPLES SEIZED WAS KNOWN TO BE DOMESTIC.

*Includes only those samples known to be domestically cultivated. In many cases, this is unknown; therefore, these figures probably represent a low estimate.

**Percentages given are of the number of Cannabis samples analyzed by the Project which were seized in the given year.

Table 6. Arithmetic Cannabinoid Averages of Domestic Cannabis Samples by Year Seized

<u>Year</u>	<u>No. of Seizures</u>	<u>% Δ^9-THC</u>	<u>% CBD</u>	<u>% CBC</u>	<u>% CBN</u>
75	9	1.24	0.00	0.19	0.02
77	16	3.02	1.18	0.25	0.19
78	12	1.85	0.01	0.13	0.16
79	14	3.74	0.22	0.20	0.19
80	35	4.64	0.38	0.18	0.10
81	129	2.92	0.62	0.18	0.07
82	140	2.57	0.80	0.16	0.09
83	387	1.98	0.46	0.14	0.07
84	331	2.55	0.48	0.19	0.17
85	842	2.21	0.44	0.15	0.10
86	796	1.87	0.43	0.16	0.08
87	541	2.45	0.62	0.21	0.12
88	412	2.82	0.43	0.16	0.12

Figure 2: Domestic Cannabis THC% versus Year of Confiscation

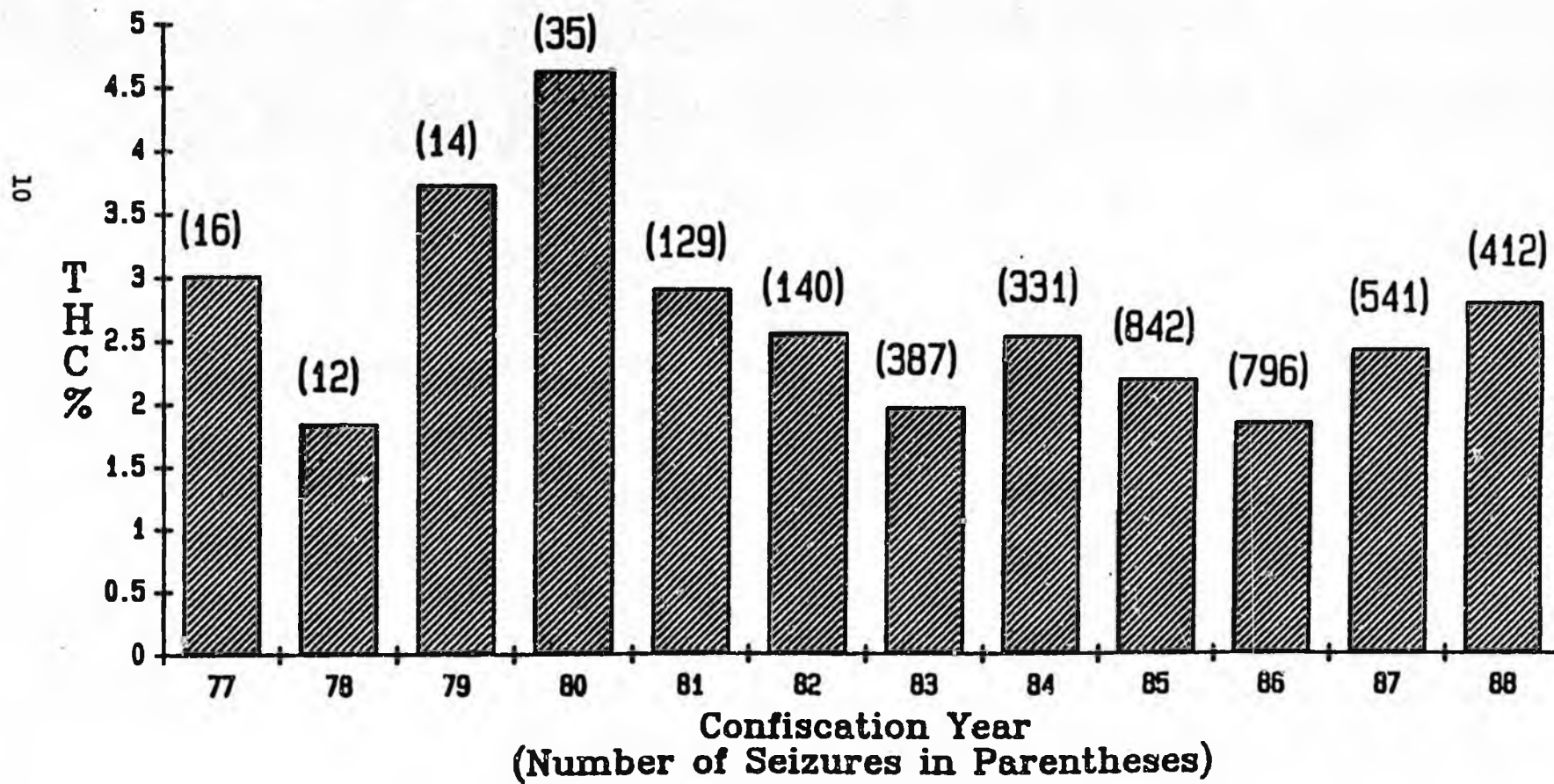


Table 7. Δ^9 -THC Averages (non-normalized*) for Domestically Cultivated Cannabis Samples Analyzed through December 31, 1988 by Year Seized at Description

YR	BD	MH	SM	YR/TOTAL
75	0.00(0)	1.24(9)	0.00(0)	1.24(9)
77	0.00(0)	0.51(1)	3.20(15)	3.02(16)
78	1.68(1)	1.42(10)	6.28(1)	1.85(12)
79	0.00(0)	3.95(4)	3.66(10)	3.74(14)
80	0.00(0)	0.72(11)	6.44(24)	4.64(35)
81	2.87(19)	1.62(90)	6.42(30)	2.92(124)
82	11.50(1)	2.04(127)	7.48(12)	2.57(140)
83	4.14(11)	1.80(370)	9.23(6)	1.98(387)
84	3.04(25)	2.05(276)	6.83(30)	2.59(331)
85	4.31(35)	1.86(767)	7.07(40)	2.21(842)
86	6.64(16)	1.60(761)	8.38(19)	1.87(796)
87	4.32(27)	2.08(486)	8.03(22)	2.45(941)
88	4.40(39)	1.78(320)	7.88(53)	2.82(412)
	-----	-----	-----	-----
**	4.22(174)	1.87(3240)	6.45(263)	2.31(3683)

Description Key:

Description; code for the physical description of samples as follows:

MH - Marijuana; marijuana in the form of loose Cannabis plant material with leaves, stems and seeds; includes cigarettes and those samples which cannot be described otherwise.

BD - Buds; marijuana in the form of buds of flowering tops of the Cannabis plant with seeds.

SM - Sinsemilla; marijuana in the form of sinsemilla; i.e., flowering tops of the female Cannabis plant with no seeds.

* Weight of Seizure not known. Figures are percent by dry weight.

** Averages include 19 samples which were seized prior to 1975. The number in parentheses indicates the number of samples analyzed.

Table 8. Δ^9 -THC Averages (non-normalized*) for Domestically Cultivated Cannabis Samples Analyzed through December 31, 1988 by Year Seized and Source of Confiscation

YR	FG	PD	PM	PS	ST	YR/TOTAL
75	0.00(0)	0.00(0)	1.24(9)	0.00(0)	0.00(0)	1.24(9)
77	0.00(0)	0.00(0)	3.20(15)	0.31(1)	0.00(0)	3.92(16)
78	0.00(0)	0.74(1)	1.68(1)	1.98(10)	0.00(0)	1.89(12)
79	3.48(11)	4.71(3)	0.00(0)	0.00(0)	0.00(0)	3.74(14)
80	6.48(20)	1.56(10)	0.00(0)	2.67(1)	3.62(4)	4.64(35)
81	1.70(1)	0.00(0)	3.33(88)	0.00(0)	2.04(40)	2.92(129)
82	0.00(0)	2.04(7)	5.12(15)	0.00(0)	2.28(118)	2.57(141)
83	0.00(0)	1.40(2)	1.11(1)	0.00(0)	1.99(384)	1.08(387)
84	0.00(0)	0.00(0)	0.00(0)	0.00(0)	2.53(331)	2.53(331)
85	0.00(0)	0.00(0)	3.21(2)	0.00(0)	2.21(840)	2.21(842)
86	0.00(0)	0.00(0)	5.98(3)	0.00(0)	1.85(793)	1.87(796)
87	0.00(0)	0.00(0)	3.15(15)	0.00(0)	2.43(526)	2.45(541)
88	0.00(0)	0.00(0)	0.00(0)	0.00(0)	2.82(412)	2.82(412)
**	3.89(48)	2.26(25)	3.38(149)	1.90(12)	2.24(3049)	2.31(3683)

Description Key:

Description; code for the physical description of samples as follows:

- PM - Potency Monitoring; designates those samples received through the DEA under the scope of the Potency Monitoring Program.
- PS - Psychiatric; received through a psychiatrist or other MD from a patient having psychiatric or medical problems related to marijuana use.
- PD - Police Department; designates those samples received from police department; e.g., samples received from the Gulfport, Miss., police chief would be classified as PD; place seized would be Gulfport, Miss.
- ST - State Crime Labs; designates those samples received from state crime labs or other state agencies. In the overall printout, samples received from state agencies will be classified by the state's 2-letter abbreviation as used by the U.S. Postal Service.
- FG - Fugitive; designates samples received when no arrests were made.

* Weight of seizures not known. Figures are percent by dry weight.

** Averages include 19 samples analyzed which were seized prior to 1975. The number in parentheses indicated the number of samples analyzed.

Table 9. Average Concentrations* of Four Cannabinoids Found in All Hashish Samples Analyzed by the Project through December 31, 1988

<u>Year</u>	<u>Seizures</u>	<u>% Δ^9-THC</u>	<u>% CBD</u>	<u>% CBC</u>	<u>% CBN</u>
74	53	0.86	1.99	0.28	2.28
75	88	2.31	2.60	0.38	1.67
76	52	3.28	3.23	0.37	2.54
77	44	1.81	2.94	0.22	1.72
78	51	2.15	4.03	0.23	2.07
79	43	2.32	5.45	0.16	1.76
80	37	2.58	7.58	0.38	1.88
81	13	2.91	6.51	0.28	1.90
82	32	2.69	6.73	0.10	1.45
83	47	5.47	6.15	0.13	1.62
84	59	5.75	3.25	0.31	1.59
85	41	6.49	2.30	0.34	1.33
86	53	2.63	1.10	0.30	1.27
87	63	2.62	1.63	0.19	1.24
88	25	3.32	1.76	0.22	1.04
TOTAL	**737	3.00	3.46	0.27	1.73

* All figures are given as percent by dry weight.

** Averages include 36 samples analyzed which were confiscated prior to 1974.

The above averages are not normalized.

Table 10. Average Concentrations* of Four Cannabinoids Found in All Hash Oil Samples Analyzed by the Project through December 31, 1986

<u>Year</u>	<u>No. Of Seizures</u>	<u>% Δ^9-THC</u>	<u>% CBD</u>	<u>% CBC</u>	<u>% CBN</u>
74	19	15.88	10.87	1.41	3.91
75	29	13.09	6.71	0.86	4.21
76	18	18.82	10.25	1.16	5.07
77	17	18.89	6.83	0.57	4.98
78	9	21.41	6.06	1.39	5.07
79	9	20.91	0.57	1.54	6.00
80	8	16.56	8.67	1.02	5.30
81	5	17.45	10.16	1.35	3.53
82	8	19.88	8.28	1.58	4.34
83	30	21.36	3.25	1.47	4.57
84	33	16.75	1.36	1.06	4.31
85	25	15.08	0.42	0.96	5.08
86	23	16.51	2.10	1.52	3.18
87	22	13.36	0.29	0.99	3.95
88	11	7.41	1.19	0.64	2.32
TOTAL	**275	17.01	4.54	1.13	4.37

*All figures are given as percent by dry weight.

**Averages include 9 samples analyzed which were seized prior to 1974.

Table 11. Number of Seizures and Normalized Average Delta-9-THC Concentrations of All Samples Received from each DEA Laboratory and Analyzed by the Project through December 31, 1988

LAB	CANNABIS		HASHISH		HASH OIL		TOTAL
	NO. OF SEIZURES	NORMALIZED -THC CONTENT	NO. OF SEIZURES	NORMALIZED -THC CONTENT	NO. OF SEIZURES	NORMALIZED -THC CONTENT	NO. OF SEIZURES
STRL	122	3.76%	95	2.01%	32	5.13%	239
NERL	289	2.61%	142	2.76%	46	20.22%	477
MARL	77	2.82%	12	0.48%	1	16.15%	90
SERL	1716	3.06%	110	2.10%	127	14.50%	1962
NCHL	306	2.40%	43	2.96%	17	22.01%	366
SCRL	1792	2.95%	36	1.44%	13	18.06%	1841
SWRL	1397	1.81%	129	3.94%	16	12.11%	1541
WRL	486	5.20%	143	1.33%	26	24.77%	655
OTHER	4279	1.68%	19	0.94%	7	28.09%	4305
TOTAL	10464		737		275		11476

KEY: STRL - SPECIAL TESTING AND RESEARCH LABORATORY
 NERL - NORTHEAST REGIONAL LABORATORY
 MARL - MID-ATLANTIC REGIONAL LABORATORY
 SERL - SOUTH EAST REGIONAL LABORATORY
 WRL - WESTERN REGIONAL LABORATORY
 SCRL - SOUTH CENTRAL REGIONAL LABORATORY
 NCHL - NORTH CENTRAL REGIONAL LABORATORY
 SWRL - SOUTHWEST REGIONAL LABORATORY

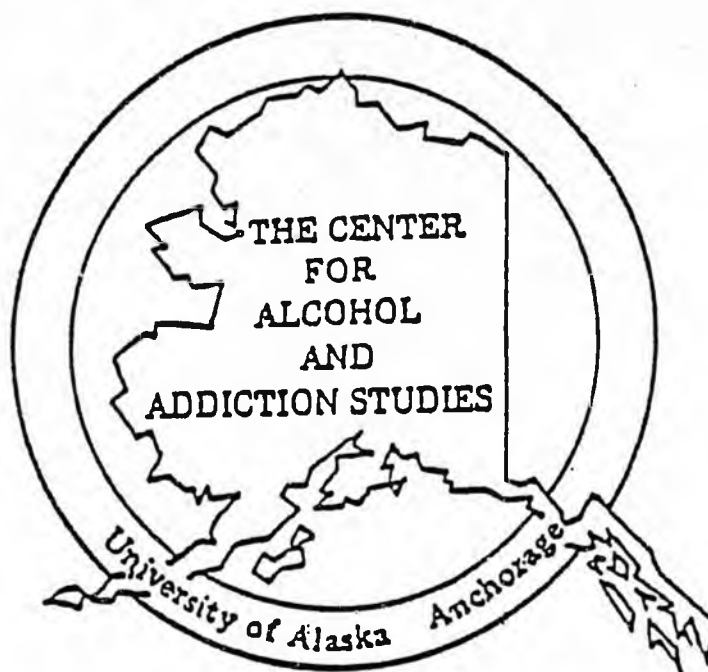
Table 12. Number of Seizures and Normalized Average Delta-9-THC Concentrations of Samples Received from Each Laboratory and Analyzed by the Project October 1, 1988 through December 31, 1988

LAB	CANNABIS		HASH/ISH		HASH/HIL		TOTAL
	NO. OF SEIZURES	NORMALIZED -THC CONTENT	NO. OF SEIZURES	NORMALIZED -THC CONTENT	NO. OF SEIZURES	NORMALIZED -THC CONTENT	NO. OF SEIZURES
STRL	1	2.90%	0	0.00%	0	0.00%	1
NERL	13	2.53%	0	0.00%	0	0.00%	13
SERL	21	1.60%	3	2.18%	0	0.00%	24
NCRL	8	2.97%	0	0.00%	0	0.00%	8
SCRL	64	3.30%	0	0.00%	0	0.00%	64
SWRL	26	2.65%	2	4.26%	1	5.25%	29
WRL	61	4.10%	2	2.21%	0	0.00%	63
OTHER	310	3.79%	0	0.00%	0	0.00%	310
TOTAL	504		7		1		512

KEY: STRL - SPECIAL TESTING AND RESEARCH LABORATORY
 NERL - NORTHEAST REGIONAL LABORATORY
 MARL - MID-ATLANTIC REGIONAL LABORATORY
 SERL - SOUTH EAST REGIONAL LABORATORY
 WRL - WESTERN REGIONAL LABORATORY
 SCRL - SOUTH CENTRAL REGIONAL LABORATORY
 NCRL - NORTH CENTRAL REGIONAL LABORATORY
 SWRL - SOUTHWEST REGIONAL LABORATORY

THE FOLLOWING DOCUMENT HAS
NOT BEEN FILMED BUT IS
AVAILABLE IN THE ORIGINAL
FILE

**DRUG-TAKING BEHAVIOR AMONG ALASAKAN YOUTH - 1988:
A FOLLOW-UP STUDY**



**Bernard Segal, Ph.D.
Director, Center for Alcohol and Addiction Studies
University of Alaska Anchorage**

November, 1988

**Funded in part by a grant from the State Office of Alcoholism and Drug
Abuse, Department of Health and Social Services, Juneau, Alaska**

Ben Segal
3/16/89

Preface

Research findings are an important, but often overlooked element in helping to shape program and policy planning. This research, sponsored by the State Office of Alcoholism and Drug abuse, Department of Health and Social Services, is the second study of drug-taking behavior among Alaskan youth in grades 7 -12, designed to provide local and State policy makers and planners with research information to aid in developing initiatives for addressing smoking, drinking, and drug use among early adolescents and teenagers.

This report furnishes information on both the extent and patterns of drug, alcohol, and tobacco use among Alaskan youth. This document primarily concentrates on describing demographic variations in the extent of drug, alcohol, and tobacco use among students in grades 7-12, and compares the major findings with those reported from an earlier survey. Future reports will also provide a more indepth analysis of some of the findings described in this document.

Knowledge of the extent, or prevalence of drug use, is basic to planning strategies to prevent or reduce drug-taking behavior among Alaskan youth. Prevalence, as used here, represents an estimate of the number or proportion of students in the state who reported having had experience with one or more illicit chemical substances, alcohol, or tobacco, in the form of cigarettes or smokeless or chewing tobacco. In the sections to follow the findings are presented on demographic variations on the prevalence of drug-taking behavior related to basic planning units - grade, gender, ethnicity, and regions. It is anticipated that this information will be utilized to help coordinate a comprehensive and coordinated approach that reduces and prevents drug-taking behavior among Alaska's most important resource - it's youth.

Bernard Segal, Ph.D.
Principle Investigator

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There are many people to thank for their generous assistance. Ellen R. Segal, my research assistant, was responsible for coding each questionnaire, entering the data in the computer, and establishing the data base. She worked diligently and responsibly, overseeing that each questionnaire was accurate and that the data was entered correctly. Her conscientiousness insured that the data was both reliable and valid.

My colleague, Dennis G. Fisher, Ph.D., provided invaluable assistance. His willingness to share ideas, review and edit drafts, and offer critical analysis, was of significant help to me as I strove to interpret the data. Thank you Dennis!

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As usual, the staff of the University of Alaska Anchorage's Office of Information & Technology was there when I needed help. Ron Langly, its Director, always cheerful, saw that I was never left without technical assistance. I am especially appreciative of the help provided by Victor Kapella, who found solutions to problems that seemed insurmountable to me. It has been a pleasure to observe Victor grow and mature as a professional program analyst. The 'nodies' were also always available and helpful. Pam Woods, Valerie L. Johnston, and Tamara L. Case, among others, deserve special thanks.

This research could not have been accomplished without the assistance of the many school officials in the participating districts. Too numerous to name here, I would nevertheless like to thank all of them for their help. I would also like to thank the students who volunteered to participate in the study. This research would not have been possible without their trust.

Finally, I would like to extend my appreciation to the Coordinator of the State Office of Alcoholism and Drug Abuse, Mat Felix, and to his staff, for their valuable assistance.

Patterns of Drug-Taking Behavior Among Alaskan Youth-1988:
A Follow-Up Study

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Chapter 1 Introduction

Drugs Use in the United States

The problem of drug use¹ within the United States has come to be one of the more highly publicized yet least understood phenomena among contemporary health and social problems. This state of affairs is directly related to the rather rapid and dramatic increase in drug use, particularly among youth, over the past twenty to thirty years. The problem of drug use emerged so rapidly that it initially precluded any concentrated attempts to develop an understanding of how and why drugs became incorporated so quickly into the national life-style. Early research efforts consisted largely of studies that attempted to identify psychosocial correlates of drug use. Few studies attempted to gain data about the nature and extent of drug use. Instead, efforts were mainly directed at determining the extent to which drug users, primarily college students, were deviant - both psychologically and socially (Anglin, Thompson, & Fisher, 1986; Segal, Huba, & Singer, 1980). Many of these studies, however, often yielded contradictory and piecemeal findings and, for the most part, failed to provide adequate information to help direct appropriate and relevant countermeasures. It was not until the late 1960s that efforts began to shift away from research which reacted to the problem, to research that attempted to gain a perspective on the problem.

In 1966 the National Institute on Drug Abuse (NIDA), in order to begin to achieve a perspective on drug use within the United States, sponsored a large nationwide study of adolescents to acquire information about the nature and extent of drug use among the nation's high school seniors (Johnston, 1973). This project has since evolved into an annual study, of which the latest report was released 1987. In 1977, NIDA commissioned the first national household survey designed to monitor the extent of illicit drug use in the nation among youth (ages 12-17), young adults (ages 18-25),

¹Since illicit drug use constitutes the problem to be addressed within this research, the terms 'drug abuse,' 'drug use,' and 'drug-taking behavior' will be used interchangeably in the text of this document.

and adults (ages 26+) (Cisin, Miller & Harrell, 1978). The national survey has since been maintained, with the latest findings having recently been released that describes the pattern and prevalence of drug use in the nation during 1985 (NIDA, 1988). These studies, together with other survey research funded by NIDA (summarized in Richards, 1981), have provided a clearer perspective on the nature and extent of drug use in the United States.

Drug Use in Alaska

Alaska, however, was not included in any national study. Because information about the nature and extent of drug use within Alaska was lacking, there was no data base or framework to measure changes in patterns and prevalence of drug use over given time periods. Nor was there a basis for comparing levels of drug use within the state to prevalence statistics reported for the 48-contiguous states ("lower-48" states). The need for a broad-based epidemiological study in Alaska was imperative because Alaska, with its predominantly youthful population and its "last frontier" environment, was alleged to have a higher prevalence of drug use than in the lower-48 states.

The need to gain information about drug use in the state was realized by the State Office of Alcohol and Drug Abuse (SOADA) when, in 1981, it commissioned a study by the Center for Alcohol and Addiction Studies (CAAS) to ascertain the nature and pattern of drug-taking behavior in the state. This study was undertaken in two ways: (1) a survey of the general population 18 years and older, and (2) a survey of school age youth in grades 7-12. The latter research involved studying eight widely-separated urban and rural school districts representative of the different regions of Alaska, except for the Aleutian chain. The locations were Anchorage, Barrow, Bethel, Fairbanks, Juneau, Kotzebue, Nome, and Sitka. These sites were selected in order to obtain a representative sample of the state's junior and senior high school students. This research also served to establish baseline information about drug-taking behavior among Alaskan youth so that comparisons could be made with findings from subsequent studies.

The results of both studies were reported in 1983 (Segal, 1983a, 1983b). Briefly, the findings indicated that lifetime use of a drug (ever tried) was higher among school age youth between 12 to 17 years, and adults 18 and older, than among comparable groups found in the lower 48-states. These findings indicated that allegations of higher levels of drug use in Alaska were substantiated. The findings from these two studies have formed a frame of reference that helped to address the problem of drug use in the state.

The School Follow-up Study

The present research, also under the auspices of SOADA, is a follow-up study of the initial survey research undertaken during 1981-1982 of youth in grades 7-12. The decision to resurvey school age youth was based on the following reasons: (1) accessibility of the survey population, (2) cost, (3) the need to determine how the pattern and extent of drug use compared to previous findings, and (4) an attempt to determine what effects prevention efforts, introduced in the interval between the initial and follow-up surveys, have had. The specific aims of the current study were: (1) to assess the nature and extent of current drug-taking behavior among Alaskan youth, (2) to compare the current findings with the previous study of drug-taking behavior, (3) to examine psychosocial characteristics associated with use and nonuse of chemical substances, and (4) to explore some of the implications that the findings have for prevention of substance abuse. Some of the study's specific objectives are:

- (1) To obtain demographic information about adolescents in grades 7 - 12 relative to use or nonuse of chemical substances.
- (2) To obtain information on the prevalence of specific chemical substances, including alcohol and tobacco.
- (3) To obtain data relating to patterns of drug-taking behavior, including alcoholic beverages and tobacco products, and
- (4) To obtain information about some of the consequences of drug use.

The information presented in this follow-up study will provide a more contemporary and more comprehensive understanding of drug-taking behavior and will also serve as a source of information to help human service providers increase their effectiveness in dealing with substance abuse. The findings also have implications for planning and policy development by governmental authorities, as well as value to local and state governments and governmental agencies in their efforts to understand and deal with the health, social, economic and legal consequences of drug-taking behavior.

Chapter 2

A Historical Review of Drug Use in Alaska

Drugs and the Oil Pipeline Construction Period

As early as 1973, in planning for the potential effect of drug use anticipated from the construction of the oil pipeline to start in 1974, the State of Alaska recognized that it was confronting a 'potential non-normal crisis situation, and will have to adopt unusual methods to cope with this unusual situation' (Poppe, 1973, p. 1). Before this time drug use was not considered to be a significant problem in the state. Except for marijuana use, and a few heroin addicts, the state considered itself to be isolated from the large-scale drug problems that were being experienced in the lower-48 states because of its relative geographic separation from the lower-48 states. By the early 1970s, however, there was evidence that the drug-taking behavior that had permeated school age youth in the lower-48 states had started to manifest itself in Alaska. Porter and her associates (1973), for example, found that 36.6% percent of Anchorage's school children (grades 6-12) had used one or more drugs other than alcohol or tobacco at least once, and that 19.8% had used drugs during the past seven days prior to being surveyed; 4.5% had also reported using drugs four or more times in the last seven days. Marijuana was the most commonly used drug, followed by solvents, stimulants, amphetamines, hashish, mescaline, and peyote. It was noted in the study that multiple drug use was evident, and that the prevalence of reported drug use exceeded such reports for students in Dallas, Texas, and in San Mateo, California (Porter et al., 1973).

The importance of these findings were apparently overlooked in the state's efforts to prepare for the health, social, and economic consequences of the pipeline construction. Had they been utilized they could have indicated that there was an immediate need to address drug use. This would have minimized the adverse effects of substance abuse on youth during the pipeline period. Additionally, Porter et al.'s (1973) finding could have served as a base line to assess any changes in drug-taking behavior among school age youth that occurred in succeeding years.

Alaska, however, did not take any specific steps to ready itself for this projected increase in drug use, and was thus unprepared for the dramatic changes it was to undergo with respect to drug use in the state. Instead, the state focused its resources on the problems resulting from a significant increase in alcohol consumption, and only limited attempts were made to assess or to begin to deal with other forms of drug use. The state was especially hampered in its effort to respond to the drug problem because there was little information available about drug use in the state to enable health planners to anticipate needs. The State Office of Drug Abuse, which was then charged with the responsibility for compiling statistics, and with developing treatment and prevention strategies, could only estimate the extent of drug use in Alaska in the mid 1970s. It reported as follows:

In Alaska, the major drug abuse problem is multiple drug use - that is, the use of a combination of drugs which may also include alcohol. This problem is the most severe both in terms of numbers of users, and in the potential for causing physical damage.

It is difficult to describe the drug-abusing population in Alaska. Clearly, young people are involved, and they show up most frequently in arrest and treatment statistics. Young adults and middle-aged individuals (particularly women) also impact the treatment and social service system, but their numbers are not known.

Native substance abuse rates appear to be higher than non-native rates, but this may be partially a reflection of greater Native use of public social service agencies as opposed to private physicians.

The major substances abused after multiple abuse are tranquilizers and anti-depressants, primarily among urban, non-native females age 36-50; and narcotic analgesics, including heroin and codeine. Prescription medications made up a large number of the cases in this category.

The precise nature and extent of the drug abuse problem, is not

clear at this time. It is anticipated that . . . the coming year (will) give . . .
(a) more accurate picture (State Office of Drug Abuse, 1975, pp. 1-3).

By this time, however, the state had begun to experience the initial effect of the oil pipeline construction project, and the information it needed to deal with drug use was late in coming. Additionally, what information that was derived was considered to be incomplete because of the limited population it was obtained from, and because "the rapidity of social and economic change in the state invite caution in interpreting the . . . statistics (State Office of Drug Abuse, 1976, p. 21)." More importantly, was that the lack of this information meant there was no way of precisely determining to what extent the incidence and prevalence of drug use in the state was affected by the construction of the pipeline¹.

That the construction of the transalaska pipeline (1974 to 1978) had an effect on drug use in the state is undisputable. This effect is well illustrated in a report by the Alaska State Troopers in 1976 which described the problem of drug use as "growing to such magnitude that illicit drugs were coming into Alaska by every conceivable means imaginable, and the drugs were being distributed to virtually every city and village in Alaska" (p. 2). But because reliable data were lacking to serve as a baseline to gauge what changes took place, this lack obstructed any attempts to identify related impacts that may have occurred in the state. It therefore became difficult to accurately determine the extent to which the pipeline contributed to the increase in drug use, and to identify the adverse health, social, and economic impacts related to drug use. Only general estimates or qualitative accounts of events were possible.

¹It should be noted that the lack of information about who impacts the treatment and social service system, with specific respect to alcohol and drug-related problems, has since been rectified. A statewide management information system (MIS), developed by the State Office of Alcoholism and Drug Abuse (SOADA), became operational in 1983, and important data about client utilization of alcohol and drug treatment programs has since been reported by SOADA.

Lonner (1983), in a comprehensive review of the health and social impacts of substance abuse during the pipeline construction period, described the few years of the pipeline construction as follows:

(It) . . . resulted in a new population entering Alaska which, because of its work force character (younger 20-29 and older 44-59, single, male, skilled and unskilled), exaggerated (through massive over-representation of these characteristics) the already skewed character of the resident Alaska population. Placing this new population atop the existing population, given some level of interaction between them, and compounding this situation with the excitement, wages, and other features of the project resulted in very expectable outcomes. (p. VIII - 8)

One of the outcomes of this situation was a rise in the level of substance use in the state, especially marijuana and cocaine. Lonner (1983) indicated that the use of cocaine and marijuana was probably directly related to the prevalence of money, and to the previously derived (drug) habits pipeline workers brought with them to Alaska. A general assessment of the changes that took place in the state that were largely related to the construction of the pipeline were outlined by Lonner:

1. An increase in marijuana use among the young.
2. An increase in concurrent poly-drug use (e.g., alcohol, marijuana and cocaine) resulting in a number of disabilities.
3. A lowering of the age for beginning drug use.
4. An increase in petty crimes related to obtaining money for drugs.
5. A continuing or increased tolerance for alcohol as a substance of choice for young people, particularly when abandoning or diminishing use of other substances and emulating the behaviors of their parents.
6. A continuing disapprobation of drugs by parents but more tolerance of youthful drinkers.
7. Continued excessive use of licit drugs.
8. Increasing penetration of all age groups of cocaine, based on ability to pay.

Attempts by the state to estimate drug use, beginning in 1976, were initially made by evaluating information about clients who entered treatment programs funded by state agencies. Although it is difficult to generalize from such data, it nevertheless provided some basis for describing drug use. These statistics indicated that out of 491 clients who entered a drug treatment program between July 1974 and June 1975, the largest number were admitted for a heroin related problem (31%). Problems with marijuana were second (12%), followed by amphetamines (10%), hallucinogens (4%), barbiturates (3%), and cocaine (2%). Based on these findings it was concluded that "drug abuse problems in Alaska appear to be increasing . . . and (are) reflected in a dramatic increase in heroin addicts entering treatment (State Office of Drug Abuse, 1976, p. 27)." As a result of these findings the State Office focused its efforts on addressing this addiction problem, investing both funds and resources to support established narcotic drug treatment programs and to start new ones.

The State Office of Drug Abuse also recognized that it lacked hard data on the nature of drug use in the state, particularly with respect to the impact of the pipeline on drug-taking behavior. In lieu of such data the State Office provided qualitative information, in the form of anecdotal reports from communities directly impacted by the pipeline construction. The report attempted to identify the treatment, rehabilitation and prevention needs that were perceived as necessary to combat substance abuse.

The description of the problems faced by the Municipality of Anchorage provided an excellent characterization of the problems that the state as a whole was experiencing (State Office of Drug Abuse, 1976):

Youth in the city of Anchorage, who constitute almost 40% of the population, are raised in a boomtown atmosphere that fosters immense cultural and communal dislocations. Anchorage as the center of the population in the state of Alaska and major transportation network for the entire state, has experienced an accelerated growth in population due to the discovery of oil on the

Northern Slope and concomitant pipeline construction activities. It is a city that is rapidly being transformed from the community it was a few short years ago to a rapidly growing metropolitan area with all the inherent problems of such growth.

Population growth in the Anchorage area increased by six percent between the first two quarters of 1975 and last two quarters of the same year. Most of that growth is largely due to immigration of a highly transient population seeking the wealth they had dreamed of in the 'lower forty-eight'. Many are single, unattached pipeline construction workers, who at peak season work nine week shifts on the pipeline. Many return to Anchorage for a two week rest and recuperation with more money in their pockets than they'd ever dreamed of earning. At this time they begin venting their frustrations in any ways available.

Many of these new immigrants as well as Alaskans must live separate from their families during these nine week periods. Housewives are often left alone with small children in desperate isolation during the long and dark winter months without the familiar support of family and friends. The additional stresses imposed by this life-style are destructive to one degree or another on all but the most solid relationships between people. The price being paid for the boom is reflected in such social indicators as the increasing divorce rate in Anchorage; the rapidly increasing reports of child abuse and neglect; and reports of increasing school vandalism in the city to the extent that armed security guards are being permanently stationed in city schools.

Many newcomers to the area were strong, independent people seeking increased opportunities. At the same time many new arrivals can only be considered 'misfits' who desperately see Alaska as their last chance for life improvements. Many of these people have brought with them a life-style of misery which is further intensified by the apparent abundance of others surrounding them. One measure of the depth of frustration and powerlessness felt by

these people are indications of increasing drug use.

The severity of the problem is increasing and is reflected by the increase of heroin among youth. As the incidence, as well as the social and economic costs of drug abuse steadily rises, the need for resources to combat drug abuse problems becomes imperative. (pp.10-14)

By the time the state organized its efforts to fully combat the problem of drug abuse the pipeline construction period was over, and some of the effects were immediately noticeable. Lonner (1983) indicated that following the pipeline period, which ended in late 1978, a variety of changes were noted with respect to substance abuse:

1. A decline in the range of available drugs, particularly amphetamines, tranquilizers, and LSD.
2. A decline in the prevalence of cocaine due to money nonavailability.
3. A stabilization of marijuana use, particularly in the 18-30 year old group.
4. A lowering in the age of drug experimentation.
5. Increasing resemblance between parents' and children's substance-of-choice, particularly alcohol and marijuana, as children mature.
6. A greater variation and differentiation of habits and fads among younger populations (health fads, religions, etc.) (p. VIII-38).

The full impact that the pipeline construction era had on the state, however, with respect to the health, economic and social consequences of substance use and abuse, was not fully realized until 1979. At that time the newly formed State Office of Alcoholism and Drug Abuse (SOADA), which was created by the legislature in 1977 to coordinate the state's efforts to combat substance abuse, began to compile data that allowed it to assess the nature and extent of drug use and abuse in Alaska. SOADA's aim was to not only to attempt to use this information to identify populations at risk of becoming abusers, but also to use it to begin to

develop treatment and prevention strategies. Additionally, SOADA began to formulate new data gathering procedures that would help to make possible a conclusive analysis of the extent of drug use in the state.

The initial results of SOADA's analysis were reported in its Drug Abuse Plan for 1979 (SOADA, 1979), which represented the first effort to assess comprehensively the nature and extent of drug use in the state, and to characterize some of the health, social and economic consequences that substance abuse had in Alaska. What was revealed was that there was a substantial change in the nature of drug-taking behavior and its subsequent effects. On the one hand the incidence and prevalence of drug use rose considerably after the start of the construction of the pipeline, and the adverse impacts of such use, such as drug-related arrests, deaths, accidents, treatment admissions, etc., rose accordingly. On the other hand, subsequent to the conclusion of the pipeline, these figures showed declines, but nevertheless remained at a level that was higher than before the impact of the pipeline.

There was thus little doubt that the pipeline construction period left a substantial legacy, both positive and negative, on the state. With respect to substance abuse, it appears not to only have reinforced those drug-taking behaviors that had been established, but to have also introduced new patterns of use, and to have spread such behavior to all segments of Alaskan society, particularly to the younger members of Alaska's population.

Patterns of Drug Use and Some Health, Social and Economic Impacts

ALCOHOL

The high level of alcohol consumption in Alaska, represented by a per capita rate of 4.58 gallons of absolute alcohol for persons 19 years and older in 1982, was the highest in the nation when cross-border sales are taken into account. The national figure for per capita sales of alcohol for persons 18 and older is 3.20 gallons; in Alaska it is 3.93 gallons. In 1958 the per capita figure for alcohol sales in Alaska for persons 19 and older was 2.52 gallons. Midway into the pipeline years, in 1976, the figure was 3.94 gallons, and after the pipeline, in 1979, it was 3.72 gallons. Once the figure

rose, it continued to climb. The fact that Alaskans have one liquor outlet for every 200 persons 19 years old or older, or one outlet for every 312 people of all ages, ratios that are among the highest in the nation, helps to insure that an adequate supply of alcohol is available for consumption. Additionally, given that the tax base for alcohol increased only twice during the last 19 years, the cost of alcohol is relatively modest compared to other beverages.

The health, social and economic consequences associated with this high level of alcohol consumption make alcohol abuse the state's primary health and social problem. The effect that alcohol abuse has on the state in terms of human welfare is extensive. In economic terms the problem is estimated to cost the state over \$200 million annually (DHSS, 1983). Some of the health and social impacts associated with excessive alcohol consumption have been listed as follows (Department of Health and Social Services (DHSS), 1983):

1. 55% of all crime in Alaska is alcohol related.
2. 78.9% of all violent felons in 1980 were using alcohol at the time of their offense.
3. During 1979-1982, youth 20 and under accounted for 16% of all alcohol related fatalities and for 15% of alcohol related accidents while comprising only 2.9% of all licensed drivers.
3. 40% of all arrests in 1982 were for alcohol related offenses.
4. 52% of all fire deaths are estimated to be alcohol related.
5. 80% of the suicides in Alaska were alcohol related in 1981.
6. 68% of all drownings in Alaska are alcohol related.
7. One-third of all child abuse cases are estimated as alcohol related.

In all, the problem of alcohol abuse is a significant one for the state, and efforts to combat it have recently intensified. An increase in the budget by the legislature for the State Office of Alcoholism and Drug Abuse in 1981, implementation of prevention programs in schools, public education campaigns, expanded treatment programs, development of rural treatment programs, revised alcohol legislation, increased penalties

for driving while intoxicated (DWI) offenses, and educational programs for service providers, among many other efforts, have all contributed to increase the level of awareness about alcohol abuse and alcoholism in the state, and have helped to counteract some of the serious adverse effects that alcohol abuse has in the state. In terms of state expenditures, it has been estimated by SOADA that in 1986 the state spent \$12.60 for every dollar collected in alcohol tax on alcohol-related problems. When, however, the total revenue was 14.5 million dollars, the amount allocated to combat the problem appears relatively modest.

DRUG ABUSE

The use and abuse of other drugs in Alaska does not present the same level of problems that alcohol consumption does. Nevertheless, there have been indications that drug use is extensive, and that the health, social and economic impacts are increasing.

Until recently estimates of drug use in Alaska were not obtained from samples of the general population. Instead, SOADA, which was responsible for tabulating data on drug use, relied on obtaining data from indirect indices, that is, characterizing and analyzing data that were believed 'to relate to drug use in such a way that changes in the indicators correspond to change in actual drug abuse patterns' (SOADA, 1979, p.1). It was assumed that if a number of indicators were analyzed together, and if consistent patterns were observed, over time, then these indirect indicators could have provided a reasonably reliable indication of the nature and extent of drug abuse within the state. While such a procedure may provide data indicative of a special population of drug abusers, the use of such data to reflect on the extent of prevalence of drug use among the general population is very restricted. But even if such data cannot be used to generalize to the population as a whole, the data nevertheless provides information pertinent to a needs assessment, and yields information relevant to the full scope of prevention and treatment activities.

The State Office of Alcohol and Drug Abuse has selected a variety of indicators to estimate the extent of drug abuse in the state. Some of the

indices are: drug-related mortality data, drug treatment program admission statistics, mental health data, and criminal justice data.

Drug Treatment Program Data: 1982-1983

The initiation of a new management information system by SOADA in 1982 enabled the State Office to accurately assess all client admissions to state funded programs. Between October 1, 1982 and September 30, 1983, 13,400 admissions were reported by the 35 alcohol and drug programs funded by state monies. Of these, 9,681 were unduplicated admissions. Evaluation of these data revealed that out of a subgroup of 12,711 cases, 6.44% were for drug-related problems. (Alcohol-related problem accounted for the remaining number of cases.)

Surprisingly, drug-related admissions accounted for a relatively small percentage of cases in proportion to alcohol-related admissions, and of those drug-related cases that come to the attention of treatment programs, problems with marijuana and cocaine represented the largest number of cases.

Criminal Justice Data

Although criminal justice data are available, it should be noted that problems exist with utilizing such data. Because Alaska's drug laws and enforcement policies have changed over the past few years, it is difficult to determine how criminal justice data should be interpreted. Are increases or decreases in statistics, for example, attributable to changes in the laws or to greater emphasis on law enforcement? There is little doubt that an interaction effect is at work, but it is extremely difficult to parcel out the extent that each factor has contributed to any changes in criminal justice statistics. Nevertheless, such data affords an opportunity to monitor trends in drug use and to gain information (e.g., age, race, gender, etc.) about who has been arrested or detained for drug-related offenses.

A review of arrest statistics for drug-related offenses from 1973 to 1977 indicated that marijuana-related arrests showed the highest proportion, averaging about 60% of all drug arrests. Cocaine-related arrests ranged from 5.5% to 17.4%, averaging 9.9% over this period. Arrests for heroin-

related charges averaged 5.7% of all drug arrests. Arrests for possession or sale of stimulants amounted to 7.6% of all drug arrests. The trend over this time span (1973-1977) was for a high percentage of juvenile arrests, that is, for persons 19 years of age and under, for marijuana-related charges. Most persons arrested for narcotics violations were in the 20-29 age group. The clear majority of arrests involved Caucasians.

More recent data for 1981-1982 showed an increase in narcotic-related arrests. Between 1977-79, narcotics arrests accounted for 11.6% of all drug arrests, while in 1981-82 this category increased to 25% of all drug arrests. Between 1980-1981 those 18 and under constituted the majority of arrests (55% in 1980; 57.5% in 1981), and men outnumbered women by better than a 5:1 ratio.

Statistics reported by the Alaska State Troopers (Department of Public Safety, 1988) for the period January 1, 1986 through June 30, 1987, indicate that a total of 521 drug-related arrests were made, and that street drug seizures amounted to over \$12 million.

The criminal justice system, however, has concerns that transcend the problem of only having to deal with alcohol and drugs users or traffickers. An analysis of sex offenders (Analysis, 1985), for example, revealed that of the 350 sex offenders incarcerated in Alaska as of March 1, 1989, 31 percent of the cases required some form of treatment intervention for alcohol or drug abuse at the time of sentencing.

Based on these data it may be concluded that drug use exists in Alaska in varying degrees. Although most of this use can be directly related to the pipeline construction period, the major drug-related effects from this period seem to have bottomed out. The state has entered a new period where current drug use, although rooted in the pipeline years, has become more closely related to contemporary events. As such, drug-taking behavior needs to be understood not only in terms of its antecedent causes, but also in terms of its current correlates and effects; this information needs to be obtained for the population as a whole, and not only for specific segments of the population.

As noted above, most of the information about drug use in Alaska has been largely derived from indirect indices or secondary sources that reflect drug use among special populations, thereby significantly limiting efforts to arrive at inferences about the nature and extent of drug-taking behaviors that occurs in the general population. Stated differently, despite all the information that was compiled, there was no definitive data on who in the general population was involved in drug use, and the nature and extent of such use. The need for such information was clearly recognized by Alaska's State Office of Alcoholism and Drug Abuse which, in 1981, undertook an effort to fill this void through a research grant awarded to the Center for Alcohol and Addiction Studies (CAAS) to assess the extent and pattern of substance use and abuse in the state. Additionally, as noted earlier, SOADA initiated a statewide management information system to obtain direct information about who is utilizing treatment services and to learn about the nature of the alcohol and drug-related problems which are impacting Alaska's treatment agencies.

The purpose of the present research was to identify patterns of drug-taking behavior as related to demographic, social and psychological factors, as well as to identify the frequency, context and consequences of drug use in the state among school-age youth in grades 7 - 12. The finding would be evaluated in terms of the unique characteristics of Alaska's current environment, as well as in terms of the influences that the pipeline construction had on the state. The results of the 1983 study are reported in the results section where they are compared with the present findings. The findings from the community study (members of the general population 18 and over), have been reported elsewhere (Segal, 1983b). The major findings of the adult study are summarized in the following statements:

- The overall level of lifetime prevalence (tried a drug one or more times) was high, with 57.3% of those sampled having indicated that they had tried at least one chemical substance.
- Of the drugs used, the most prevalent were marijuana, stimulants and cocaine.

- Comparison by age groups revealed that drug use was more prevalent in the 18-25 age group than in the 26 + group.
- Prevalence rates in Alaska for both the 18-25 and 26+ age groups exceeded prevalence rates for comparable groups in the lower-48 states.

The results of the Center's research reinforced the need to address the problem of drug use in Alaska. The findings from the study of school age students also revealed an extremely high prevalence rate, and indicated further the need to focus on youth. The remainder of this report describes the current levels of drug use found among youth during 1987 and 1988, and compares the results with the findings from the data obtained during 1981 and 1982.

Chapter 3 Method

Overview

In recent years the United States has witnessed an increase in the nonmedicinal use of illicit mood altering drugs by elementary, junior and senior high school age youth, a problem which has become one of national concern. Although legal and social sanctions exist to preclude nonmedicinal use of psychoactive drugs for recreational or social purposes, they continue to be taken, and youngsters who use them place themselves at risk for potential legal, social and health problems.

The current research was undertaken as part of an effort by the State Office of Alcoholism and Drug Abuse to continue to monitor drug-taking behavior by Alaskan youth. This research is the second study in Alaska reporting on drug use and related information on youth in grades 7-12. It was designed to obtain information on the use or nonuse of drugs ranging from legal, socially sanctioned drugs for those of legal age (i.e., alcohol and tobacco), to illegal and unsanctioned drugs, such as marijuana, cocaine, stimulants, hallucinogens, depressants, inhalants, heroin, and tranquilizers, taken for nonmedicinal purposes.

Research Design and Procedures

Ideally, the best method of learning about drug-taking behavior among Alaskan junior and senior high school students would have been to survey all secondary students within the state. Because of time, travel, and resource limitations, and the difficult accessibility of many areas of the state, it was not considered feasible to undertake such a comprehensive task. Nor did we deem it necessary to obtain a representative sample of students from all the secondary schools in the state. Given the special problems that Alaska presents in terms of accessibility, we decided that schools located in regional centers in the urban and rural areas of the state would provide an appropriate representative sample of secondary school students. This decision was based on the following reasons: (1) The communities that were selected are geographically and ethnically different and encompass the major regions of the state; and (2) approximately 65% of the school age population reside within the

boundaries of the school districts selected.

The sampling procedure which provided a satisfactory means of obtaining representative data, and which allowed for cooperative planning with school districts, was area cluster sampling, a technique that takes advantage of the fact that the state is subdivided into a number of different areas. Area sampling permits sampling within given areas, such as cities within regions; the cluster component is a procedure that allows elements of the sample to be chosen from the population in groups or clusters rather than singly. In the present study the clusters were the pre-existing junior and senior high schools within a given district - which is itself within a given geographical district of the state. This procedure ideally allows for generalization of results from the sample to the larger population (Moser and Kalton, 1971). Additionally, depending on the specific features of the sampling plan in relation to the object of the assessment procedures, cluster sampling can be as efficient on a per-case basis as is simple random sampling (Selltitz, Jahoda, Deutsch, and Cook, 1967). Moreover, once the population to be sampled is defined, random or nonrandom sampling procedures could be utilized to obtain the desired sample.

Because Alaska has been divided into several major geographical regions by the state government for administrative purposes, and as each of these regions encompass an urban center, each of these regional centers constituted a specific sampling area in which cluster sampling was undertaken. Six regional areas, encompassing the totality of mainland Alaska, excluding the Aleutian Chain, were selected to constitute the sampling areas. The initial study, conducted during 1981-82, used a total of eight school districts to serve as clusters. The school districts from which samples were initially obtained were located in the following communities: Anchorage, Barrow, Bethel, Fairbanks, Juneau, Kotzebue, Nome and Sitka.

The present study expanded the geographical areas to include two additional school districts, Cordova and Seward, resulting in a broader representation of Alaskan youth. The study's results will therefore be

presented in two principle ways: (1) an aggregation of findings from all ten districts, which provides a description of current drug-taking behavior; and (2) a comparison of the current findings with the eight districts sampled in the original (1981-1982) study.

The survey procedure involved two different methods, each contingent on the nature of a school district's approach to having students respond to a questionnaire, and on the size of the junior-senior school populations. The different survey procedures were either: (1) random sampling of students in grades 7-12, or (2) assessing the entire population of students in grades 7-12. Approval first had to be obtained from each of the district's school board. The sampling procedure and format of the survey were derived by working with school administrators in each district.

Some districts interpreted the drug survey as extracurricular, and allowed only those students who had parental consent to volunteer to participate in the study. In such cases samples were drawn from the body of students that had obtained parental consent. The number of refusals, however, amounted to less than 1.0%, a level that did not make any difference in the study. Other districts considered the research to be a legitimate school function that was consistent with their drug education curriculum. These districts did not require parental consent and allowed the students to decide for themselves whether to participate in the study.

The questionnaires were administered during school hours either by school personnel or by the principal investigator. The surveys were collected immediately after students completed them and forwarded to the University to ensure confidentiality.

Sampling

As described above, the state is divided into several regions so that schools could be sampled within each region in a manner representative of total students enrolled in that region. In those locations where there was only one junior and senior high school, all students present on a given day were surveyed. In such cases the actual population of students in grades 7 to 12 were surveyed. For purposes of this report, however, the data

obtained from an entire school district is treated as sample data.

When school districts contained more than one junior or senior high school, random stratification sampling was utilized to obtain adequate representation of men and women within grade levels in the different schools. The samples were not stratified for ethnic representation. It was thought that the process of random sampling would provide a representation of racial and ethnic groups proportionate to their representation in the general school population. The specific sampling procedure for each of the ten districts, together with a description of the respondents by gender and grade follows. A summary table of the total sample is presented afterward.

(1) Barrow

All students present in grades 7-12 in Barrow High School on Monday, May 4, 1987, who volunteered to participate in the study were surveyed by the principal investigator. Students who were absent were not solicited to participate. A description of the students responding to the survey is presented below.

Characteristics of the Barrow Student Sample

<u>Gender</u>	<u>n</u>	<u>%</u>	<u>Ethnicity</u>	<u>n</u>	<u>%</u>	<u>Grade</u>	<u>n</u>	<u>%</u>
Male	62	42.5	Alaska Native	88	60.3	7	26	17.8
Female	80	54.8	White	37	25.3	8	24	16.4
Unreported	4	2.7	Am. Indian	1	0.7	9	30	20.5
Total	146		Asian	16	11.0	10	27	18.5
			Black	1	0.7	11	22	15.1
			Hispanic	1	0.7	12	17	11.6
			Unreported	2	1.4			

Participation by Gender and Grade: Barrow

<u>Gender</u>	<u>Grade</u>						<u>Total</u>
	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	
Male	14	13	11	7	13	4	62
Female	12	11	15	20	9	13	80
Total	26	24	26	27	22	17	142

The extent to which this sample is representative of the school district's student population cannot be estimated because the actual class sizes and representation by gender are unknown. What is evident, however, is that there are more females than males, and that male seniors and seventh graders, and female 11th graders, may be underrepresented.

(2) Cordova

All students present in grades 7-12 who volunteered to participate in the study were surveyed on a given day by the School District. Students who were absent were not solicited to participate. A description of the students responding to the survey is presented below. A total of 118 completed questionnaires were obtained. A response rate cannot be provided because the total number of students asked to complete the questionnaire is not known. A description of the sample follows.

Characteristics of the Cordova Student Sample

<u>Gender</u>	<u>n</u>	<u>%</u>	<u>Ethnicity</u>	<u>n</u>	<u>%</u>	<u>Grade</u>	<u>n</u>	<u>%</u>
Male	65	42.5	Alaska Native	13	60.3	7	16	13.3
Female	<u>53</u>	<u>54.8</u>	White	85	25.3	8	25	21.2
Total	118		Am. Indian	1	0.7	9	16	13.6
			Asian	5	11.0	10	17	14.4
			Black	7	0.7	11	14	11.9
			Hispanic	1	0.7	12	30	25.4
			Other	1	0.8			

Participation by Gender and Grade: Cordova

	<u>Grade</u>						
<u>Gender</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>Total</u>
Male	7	12	9	9	8	20	65
Female	9	13	7	8	6	10	53
Total	16	25	16	17	14	30	118

The extent to which this sample is representative of the school district's student population cannot be estimated because the actual class sizes and representation by gender are unknown. What is evident, however, is that there are more males, but that except for seniors, classes appear to be about equally represented by gender.

(3) Fairbanks

Sampling within the Fairbanks schools was undertaken by the School District itself, utilizing the method of disproportional stratified random sampling to obtain a representative sample of students in grades 7-12. Stratification was based on school, grade, and gender. Individual students were obtained by means of a simple random sample. Based on a computer generated list of all students in the district, who were classified into the appropriate strata, a total sample of 1450 students was then randomly selected for participation in the study. At the time of sampling, which occurred on May 12, 1987, each student selected was asked to report to a central location within their school at a given time. An explanation of how and why each student was selected was conveyed, and each student was then asked to volunteer to complete the questionnaire. A total of 836 completed questionnaires were obtained. Based on a target of 1450 students, a response rate of 57.7% was obtained, a level which is considered adequate based on an anticipated return of 50%. Information describing the Fairbanks sample is presented in the tables that follows.

(4) Juneau

Sampling within the Juneau schools was undertaken by the School District itself, utilizing the method of stratified random sampling to obtain a representative sample of students in grades 7-12. Stratification was based on class and gender. A target of 600 students was sought, but a total of 418 completed questionnaires were obtained, yielding an acceptable response rate of 70%. Since the total number of students in grades 7-12 is not known it is not possible to report what percentage of the total population of students in grades 7-12 is represented in the sample. A description of the sample follows.

(5) Sitka

Sampling within the Sitka schools was performed by the School District itself. All students present in grades 6-12 who volunteered to participate in the study were surveyed. A description of the students responding to the survey is described below. A total of 661 questionnaires were administered, of which 32 were excluded because of inconsistent or

Participation by School, Gender, and Grade: Fairbanks

<u>School/Gender</u>	<u>Grade</u>						<u>Total</u>
	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	
Mckinley							
Males	17	9	13				39
Females	1	0	6				7
Ryan							
Males	17	9	13				39
Female	22	21	0				43
Tanana							
Males	16	16					32
Female	18	21					39
North Pole							
Males	21	16					37
Females	21	4					25
Eielson							
Males	18	18					35
Females	11	19					30
Alternative School							
Males			1	3	9	7	20
Females				1	2	9	12
Lathrop Sr.							
Males			14	15	22	8	59
Females			12	19	28	13	72
West Valley Sr.							
Males			14	13	16	7	50
Females			13	11	9	9	42
North Pole Sr.							
Males			20	17	17	11	65
Females			15	12	16	11	54
Eielson Sr.							
Males			24	27	22	13	86
Females			14	6	10	12	42

Total:	168	145	146	124	151	100	<u>834</u>
Males							468
Females							366

*Two student did not report gender.

Characteristics of the Fairbanks Student Sample

<u>Gender</u>	<u>n</u>	<u>%</u>	<u>Ethnicity</u>	<u>n</u>	<u>%</u>	<u>Grade</u>	<u>n</u>	<u>%</u>
Males	468	56.0	Alaska Native	51	6.1	7	168	20.1
Females	366	43.8	White	661	79.1	8	145	17.3
Unreported	<u>2</u>	<u>0.2</u>	Am. Indian	17	2.0	9	146	17.5
Total	836		Asian-Pacific	18	2.2	10	126	15.1
			Black	46	5.5	11	151	18.1
			Hispanic	22	2.6	12	100	12.0
			Other	15	1.8			
			Unreported	6	0.7			

Characteristics of the Juneau Student Sample

<u>Gender</u>	<u>n</u>	<u>%</u>	<u>Ethnicity</u>	<u>n</u>	<u>%</u>	<u>Grade</u>	<u>n</u>	<u>%</u>
Males	199	47.6	Alaska Native	41	10.0	7	86	20.6
Females	218	52.2	White	317	75.8	8	88	21.1
Unreported	<u>1</u>	<u>0.2</u>	Am. Indian	11	2.6	9	70	16.7
Total	146		Asian-Pacific	21	5.0	10	66	15.8
			Black	10	2.4	11	78	18.7
			Hispanic	6	1.4	12	29	6.9
			Other	6	1.4	NR*	1	0.2
			Not reported	6	1.4			

*Not reported

Participation by School, Gender*, and Grade:* Juneau

<u>School/Gender</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>Grade</u> <u>10</u>	<u>11</u>	<u>12</u>	<u>Total</u>
Drake							
Males	21	22					43
Females	22	27					49
Dryden							
Males	20	17					37
Females	23	21					44
J. Alternative							
Males		1	19	1			21
Females			15	0			15
Juneau-Douglas H.S.							
Males			11	37	37	13	98
Females			25	28	41	16	110
Total:	86	88	70	66	78	29	417
Males							199
Females							218

*One student did not report gender, and one did not indicate grade.

incomplete responses, yielding a response rate of 95.2%, a level well above acceptable limits. A description of the sample is provided below. Ethnicity was not asked for in the Sitka questionnaire.

Characteristics of the Sitka Student Sample

<u>Gender</u>	<u>n</u>	<u>%</u>	<u>Grade</u>	<u>n</u>	<u>%</u>
Male	253	47.1	7	99	18.4
Female	279	52.0	8	101	18.8
Unreported	<u>5</u>	<u>0.9</u>	9	88	16.4
Total	537		10	88	16.4
			11	81	15.1
			12	80	14.9

Participation by Gender and Grade: Sitka

<u>Gender</u>	<u>Grade</u>						<u>Total</u>
	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	
Male	54	54	33	37	36	39	253
Female	44	45	54	51	44	41	279
Total	98	99	87	88	22	17	532

(6) Seward

All students present in grades 7-12 who volunteered to participate in the study were surveyed on a given day prior to Christmas Vacation. Students who were absent were not solicited to participate. A description of the students responding to the survey is described below. A total of 197 completed questionnaires were obtained. A response rate cannot be provided because the total number of students asked to complete the questionnaire is not known. A description of the samples follows.

Characteristics of the Seward Student Sample

<u>Gender</u>	<u>n</u>	<u>%</u>	<u>Ethnicity</u>	<u>n</u>	<u>%</u>	<u>Grade</u>	<u>n</u>	<u>%</u>
Male	102	51.8	Alaska Native	19	6.1	7	40	20.3
Female	95	48.2	White	168	85.3	8	43	21.8
Total	197		Am. Indian	6	3.0	9	25	12.7
			Other	4	2.0	10	31	15.7
						11	40	20.3
						12	18	9.1

Participation by Gender and Grade

	<u>Grade</u>						<u>Total</u>
	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	
<u>Males</u>	24	27	8	13	23	7	102
<u>Females</u>	16	16	17	18	17	11	95
Total	40	43	25	31	40	18	197

The extent to which this sample is representative of the school district's student population cannot be estimated because the actual class sizes and representation by gender are unknown. What is evident, however, is that seniors appear to be underrepresented.

(7) Kotzebue

The school district conducted its own survey during the spring of 1988, following the procedures established by the principal investigator. The survey was administered system-wide, encompassing all 7th to 12th graders in the school district. In order to ensure the anonymity of the outlying schools, due to their smaller number of students, the Kotzebue data was merged into a single data file without identifying specific schools.

The 1982 school survey was limited to junior and senior high school students in Kotzebue. A direct comparison of the finding from the two surveys, therefore, can only be made if the data are weighted to adjust for the differences in sample sizes. A description of the Kotzebue sample follows.

Characteristics of the Kotzebue Student Sample

<u>Gender</u>	<u>n</u>	<u>%</u>	<u>Ethnicity</u>	<u>n</u>	<u>%</u>	<u>Grade</u>	<u>n</u>	<u>%</u>
Male	162	54.4	Alaska Native	244	81.9	7	58	19.5
Female	135	45.3	White	25	8.4	8	55	18.5
Unreported	1	0.3	Am. Indian	2	0.7	9	42	14.1
Total	298		Asian	3	0.3	10	54	18.1
			Hispanic	5	0.3	11	49	16.4
			Other	5	1.7	12	40	13.4
			Unreported	3	1.0			

Participation by Gender and Grade: Kotzebue

<u>Gender</u>	<u>Grade</u>						<u>Total</u>
	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	
Male	39	27	21	31	23	21	162
Female	19	28	20	23	26	19	135
Total	58	55	41	54	22	40	297

As may be observed, there are more males than females, with higher representation in the 7th and 10th grades. The extent to which this sample is representative of the school district's student population cannot be estimated because the actual class sizes and representation by gender are unknown.

(8) Bethel

All students present in grades 7-12, who volunteered to participate in the

study, were surveyed by the principal investigator on Thursday, March 6, 1987. Students who were absent were not solicited to participate. A description of the students responding to the survey is described below.

Characteristics of the Bethel Student Sample

<u>Gender</u>	<u>n</u>	<u>%</u>	<u>Ethnicity</u>	<u>n</u>	<u>%</u>	<u>Grade</u>	<u>n</u>	<u>%</u>
Males	108	47.0	Alaska Native	124	53.9	7	44	19.1
Females	121	52.6	White	47	20.4	8	42	18.3
Unreported	<u>1</u>	<u>0.4</u>	Am. Indian	3	1.3	9	41	17.8
Total	230		Asian-Pacific	3	1.3	10	36	15.7
			Hispanic	2	0.9	11	37	16.1
			Other	2	5.2	12	30	13.0
			Unreported	2	0.9			

Participation by Gender and Grade: Bethel

	<u>Grade</u>						
	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>Total</u>
<u>Males</u>	23	18	16	19	17	15	108
<u>Females</u>	21	24	24	17	20	15	121
<u>Total</u>	44	42	40	36	37	30	229

More females than males were present, but the proportion of males and females was generally consistent. As with the other districts, the extent to which this sample is representative of the school district's student population cannot be estimated because the actual class sizes and representation by gender are unknown.

(9) Nome

Students present in grades 7-12, who volunteered to participate in the study, were assessed by Nome school personnel following the procedures initiated by the principal investigator. Students who were absent were not solicited to participate. A description of the students responding to the survey is described below.

Characteristics of the Nome Student Sample

<u>Gender</u>	<u>n</u>	<u>%</u>	<u>Ethnicity</u>	<u>n</u>	<u>%</u>	<u>Grade</u>	<u>n</u>	<u>%</u>
Males	112	55.4	Alaska Native	99	49.0	7	41	20.3
Females	90	44.6	White	62	30.7	8	33	16.3
Total	202		Am. Indian	5	2.5	9	44	21.8
			Asian-Pacific	1	0.5	10	38	18.8
			Hispanic	1	0.5	11	33	16.3
			Other	31	15.4	12	13	6.4
			Unreported	3	1.5			

Participation by Gender and Grade: Nome

	<u>Grade</u>							
	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>Total</u>	
<u>Males</u>	17	19	26	28	15	7	108	
<u>Females</u>	24	14	18	10	18	6	121	
<u>Total</u>	41	33	44	38	33	13	202	

Most apparent is that seniors seem to be underrepresented but, as with other districts, the extent to which this sample is representative of the school district's student population cannot be estimated because the actual class sizes and representation by gender are unknown. Representation by gender within grade levels also varies.

(10) Anchorage

The Anchorage School District (ASD) undertook its own assessment under the supervision of the District's Assessment and Evaluation unit. Working in conjunction with the principal investigator, a sampling scheme was developed to obtain a representative sample, and to administer the survey in accordance with the study's methodology. The district elected to survey only grades 8, 10, and 12 in its secondary schools rather than grades 7-12. Grades 4 and 6 were substituted for grades 7, 9 and 11. The district elected to survey the lower grades in order to (a) assess drug-taking behavior among younger students, and (b) to establish baseline data using lower grade levels in order to measure changes in drug-taking behavior over a longer period of time.

The modification of the present sample precludes a direct comparison of Anchorage's results with those obtained in the 1981-1982 study, as well as with findings from other school districts. Anchorage's school sample will thus be weighted accordingly when it is included in the aggregated sample for 1987-1988, and when comparisons are made with previous ASD findings or with other communities.

The method of proportionate stratified random sampling was used to obtain a representative sample of students in grades 8, 10, and 12. Stratification was based on school, grade, and gender. The ASD, however, in order to provide anonymity within the district, elected to not have the schools identified. Accordingly, only the number of students listed by gender and grade are described.

A total sample of 1500 students (500 per grade) was randomly selected for participation in the study, which was conducted during April and May, 1988. A total of 1147 completed questionnaires were obtained. Based on a target of 1500 students, a response rate of 76.5% was obtained, a level which is considered highly adequate based on an anticipated return rate of 50%. Information describing the Anchorage sample is presented in the following table.

Characteristics of the Anchorage Student Sample

<u>Gender</u>	<u>n</u>	<u>%</u>	<u>Ethnicity</u>	<u>n</u>	<u>%</u>	<u>Grade</u>	<u>n</u>	<u>%</u>
Males	566	49.3	Alaska Native	43	3.7	8	421	36.7
Females	<u>581</u>	<u>50.7</u>	White	874	76.2	10	326	28.4
Total	1147		Am. Indian	27	2.4	12	400	34.9
			Asian-Pacific	42	3.7			
			Hispanic	43	3.7			
			Black	63	5.5			
			Other	51	4.5			
			Unreported	4	0.3			

Participation by Gender, and Grade: Anchorage

<u>Gender</u>	<u>Grade</u>			<u>Total</u>
	<u>8</u>	<u>10</u>	<u>12</u>	
Males	223	157	186	566
Females	<u>198</u>	<u>169</u>	<u>214</u>	<u>581</u>
Total	421	326	400	1147

As can be observed, the total Anchorage sample is relatively comparable with respect to gender, but the distribution by gender varies within grade levels.

Aggregate Samples

(1) Total Sample: 1987-1988

The total sample resulted in 4,129 students in grades 7-12 obtained from ten school districts: Anchorage, Barrow, Bethel, Cordova, Fairbanks, Juneau, Kotzebue, Nome, Seward and Sitka. Table 3-1 provides a description of the characteristics of this sample.

(2) Subsample Totals: Eight Comparison School Districts - 1987-1988

Table 3-2 provides a description of the characteristics of the students from the eight communities that constituted the follow-up study. These were: Anchorage, Barrow, Bethel, Fairbanks, Juneau, Kotzebue, Nome and Sitka.

(3) Characteristics of the 1981-1982 Baseline Study

Since comparisons will be made with the major findings from the initial drug-use study conducted during 1981 and 1982, a description of the former sample is provided in Table 3-3. The baseline study, however, did not include ethnicity in the questionnaire, which precludes comparisons on this variable.

3. THE QUESTIONNAIRE

A self-administered questionnaire was used to obtain information about use or nonuse of drugs. The questionnaire, which was similar in content to the one used in the 1981-1982 study, but formatted differently, was pilot tested to assess its reliability and to confirm that its wording was consistent with a ninth grade reading level. The instrument demonstrated sufficient content validity to assure that it adequately assessed use or nonuse of drugs, and the nature and extent of drug use by those students reported having tried a drug (Segal, 1983a). The new questionnaire was also reviewed by each school district, which had the option to make revisions or to add questions to obtain specific information that was of interest to them. Few changes, except for Nome, were made. The questionnaire

Table 3-1

Sample Characteristics
Ten School Districts: 1987-1988

<u>Gender</u>	<u>n</u>	<u>Percent</u>
Males	2097	50.8
Females	2018	48.9
Unreported	14	.3

<u>Ethnicity*</u>	<u>n</u>	<u>Percent</u>	<u>Relative Percent</u>
Alaska Native	721	17.5	20.2
American Indian	73	1.8	2.0
Asian-Pacific	113	2.7	3.2
Black	129	3.1	3.6
Hispanic	77	1.9	2.2
White	2277	55.1	63.9
Other	175	4.2	4.9
Not reported	564	13.6	

<u>Grade</u>	<u>n</u>	<u>Percent</u>
7	578	14.0
8	977	23.7
9	502	12.2
10	810	19.6
11	505	12.2
12	757	18.3

	<u>Grade</u>						<u>Total</u>
	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	
Males	314	513	240	414	259	358	2097
Females	<u>263</u>	<u>462</u>	<u>255</u>	<u>393</u>	<u>246</u>	<u>399</u>	<u>2018</u>
Total	577	975	495	807	504	757	4115

<u>Age</u>	<u>n</u>	<u>Percent</u>	<u>Relative Percent</u>
10	1	0.0	0.0
11	29	0.7	0.7
12	282	6.8	6.9
13	680	16.5	16.7
14	720	17.4	17.7
15	625	15.1	15.4
16	676	16.4	16.6
17	646	15.5	15.9
18	383	9.3	9.4
19+	27	0.7	0.7
NR**	60	1.4	

* Sitka not included. **Not reported.

Table 3-2

Sample Characteristics
Eight School Districts: 1987-1988

<u>Gender</u>	<u>n</u>	<u>Percent</u>				
Male	1930	50.6				
Female	1870	40.0				
Unreported	14	0.4				

<u>Ethnicity*</u>	<u>n</u>	<u>Percent</u>	<u>Relative Percent</u>			
Alaska Native	689	18.1	21.2			
American Indian	66	1.7	2.0			
Asian-Pacific	102	2.7	3.1			
Black	122	3.2	3.8			
Hispanic	76	2.0	2.3			
White	2024	53.1	62.3			
Native/White	79	2.1	2.4			
Filipino	6	0.2	0.2			
Other	87	2.3	2.7			
Not reported	563	14.8				

<u>Grade</u>	<u>n</u>	<u>Percent</u>				
7	522	13.7				
8	909	23.8				
9	461	12.1				
10	762	20.0				
11	451	11.8				
12	709	18.6				

	<u>Grade</u>						<u>Total</u>
	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	
Males	283	474	223	392	227	331	1930
Females	238	433	231	367	223	378	1870
Total	521	907	454	759	450	709	3800

<u>Age</u>	<u>n</u>	<u>Percent</u>	<u>Relative Percent</u>
10	1	0.0	0.0
11	24	0.6	0.6
12	240	6.3	6.4
13	620	16.3	16.5
14	670	17.6	17.8
15	587	15.4	15.6
16	620	16.3	16.5
17	591	15.5	15.7
18	376	9.9	10.0
19+	27	0.7	0.7
NR**	58	1.5	

* Sitka not included. **Not reported.

Table 3-3

Sample Characteristic
Eight School Districts: 1983

<u>Gender</u>	<u>n</u>	<u>Percent</u>
Males	1770	49.0
Females	1732	48.0
Unreported	<u>107</u>	3.0
Total	3609	

<u>Grade</u>	<u>n</u>	<u>Percent</u>
7	665	18.4
8	685	19.0
9	603	16.7
10	658	18.2
11	564	15.6
12	345	9.6
NR*	89	2.5

	<u>Grade</u>						<u>Total</u>
	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	
Males	318	321	294	322	318	186	1759
Females	<u>337</u>	<u>355</u>	<u>303</u>	<u>332</u>	<u>241</u>	<u>154</u>	<u>1722</u>
Total	655	676	597	654	559	340	3481
Unreported							128

<u>Age</u>	<u>n</u>	<u>Percent</u>	<u>Relative Percent</u>
11	2	0.1	0.1
12	202	5.6	5.9
13	633	17.5	18.4
14	623	17.3	18.1
15	611	16.9	17.8
16	610	16.9	17.8
17	482	13.4	14.0
18	254	7.0	7.4
19	16	0.4	0.5
NR*	176	4.9	

*Not Reported

used in Nome involved changing individual questions about use or nonuse of drugs into matrix form. The two types of questionnaires are presented in Appendix A.

The only exception to the utilization of the revised questionnaire for the 1977-78 study was the Sitka School District. That district, prior to the inception of the present research project, initiated its own self-study of drug use and choose to use a revised 1981-1982 questionnaire. The district released its questionnaires to CAAS for evaluation and for inclusion in the follow-up study. Results describing aggregated data, therefore, will not always include items from Sitka because the Sitka measure was not totally comparable.

Each of the three questions contained sets of items designed to obtain the information, which are listed below:

(1) Demographic

This section included question that inquired about gender, ethnic background, age, participation in drug education programs, grades obtained, and length of time lived in community.

(2) Drug Usage

Information on drug usage included an extensive set of questions on nonprescription or social/recreational use of marijuana, cocaine, crack, stimulants, hallucinogens, depressants, heroin, inhalants, and tranquilizers, with specific reference to recency and frequency of use, problems resulting from use, age of first use, and estimates of level of peer use.

(3) Alcohol

This section includes information about the quantity and frequency of consumption, and about some adverse consequences of drinking.

(4) Tobacco

Information on cigarette smoking and on use of smokeless tobacco products, including the quantity and frequency of use.

(5) Personality Items.

The use or nonuse of drugs is in part influenced by personality characteristics. The incorporation of a measure of personality attributes facilitates an evaluation of what personality traits are related to use or nonuse of drugs, and to different patterns of drug use.

Confidentiality and Anonymity

The purpose of the study was to gain an understanding of drug use among Alaskan youth, not to identify individuals who used drugs. In an effort to acquire reliable answers from the students, precautions were taken to protect their confidentiality and anonymity. The students' names were not asked for in any phase of the research. The only identifying information requested on the survey was age, ethnicity, gender and grade; no birthdate was requested. All students that were eligible were asked to volunteer to participate in the research. Few refused to participate when asked. In some locations students actively supported the study, viewing it as a means of helping their school combat the use of drugs.

In addition to protecting the anonymity of students, the confidentiality of the school districts was also protected. In accordance with an agreement with each district no findings would be disclosed by the principal investigator - each district would have the option of releasing its findings. Because some districts have not yet received their reports, and because some communities have requested anonymity, no school districts are identified in this document. Findings will be reported as aggregated data either representative of the total sample or school districts grouped together to form regional samples. No community will be able to be singled out when regional comparison are provided.

4. Data Checking

All the data obtained were entered into a computer file for detailed analysis. Prior to entry, each questionnaire was checked for inconsistencies or improbable response patterns. Questionnaires which contained partial or indistinct responses were corrected when possible. Any improperly completed questionnaires, or those with incomplete pages, were discarded. The response rate for each school district was noted above.

After each school district's data was entered into a computer data file, the file was screened to check for inaccuracies by determining if any responses were out of range for the questions asked, or for inconsistent responses.

5. Return Rate (Completion Rate)

A total of 4,381 questionnaires were returned to the Center for Alcohol and Addiction Studies from the ten school districts surveyed. After the checking process, 252 were discarded for one or more of the reasons cited above, resulting in a return or completion rate of 94.2%, which exceeds a minimal level of 90%. A total of 4,129 completed questionnaires were therefore entered into the 1987-1988 system file for statistical analysis. Any results reported for the 1987-1988 study are based on this figure unless otherwise stated.

6. Data Analysis

SPSSX system files were formed on the University's Digital Vax 8800 computer, running the VMS operating system, version 4.7. Analysis of the data was undertaken utilizing SPSSX programs (SPSS, 1988).

Because the research involved disproportionate samples, prevalence data was obtained by utilizing weighted and unweighted statistical analyses. A weighted analysis adjusts for differences in sample sizes by computing means and percentages that are based on their exact representation of the population sampled, except for sampling error. It is therefore possible to adjust for the differences in sample sizes among the ten different school districts. Weighting was accomplished by utilizing the SPSSX "weight command," identifying each community as the weighting variable. The results section contains a comparison between the weighted and unweighted findings.

Chapter 4

Results: Part I TOTAL SAMPLE

Overview

This chapter describes the results of the survey inquiring about nonmedicinal drug use by students in grades 7-12. Information compiled from over 4,000 students by means of a comprehensive questionnaire can be very extensive. There are many ways to analyze and report the results. Some may have either special or unique significance, while some may be too general to be of value. It is necessary to place limitations on the reporting of the survey findings with the aim of presenting data that would be best utilized by the schools, by the State Office of Alcoholism and Drug Abuse (SOADA), by health planners, and by governmental bodies. Additional information will be forthcoming in supplemental reports.

The results are divided into two chapters. Chapter four reports the findings from the total sample, representing an aggregation of the ten school districts. Chapter five describes the findings from the eight communities that were followed-up in the present research, and focuses on comparisons with the 1981-1982 findings.

The findings within this chapter are grouped into four categories: (A) prevalence data, which describes the type, extent, pattern, and frequency of drug-taking behavior, (B) demographic characteristics, which describe the association between prevalence and specific characteristics of the sample, such as the relationship between gender and drug use, (C) comparison with other research findings, and (D) correlates of drug use, which describe some of the factors that may be viewed as either cause or consequences of drug use.

The data are presented in both tabular and graphic form. In some figures the names of each substance has been abbreviated. The following is a legend to help interpret the abbreviations used when the findings are presented graphically.

MJ = Marijuana
CK = Cocaine
CR = Crack
ST = Stimulants
HL = Hallucinogens
DP = Depressants
HR = Heroin
IN = Inhalants
TQ = Tranquilizers
AL = Alcohol
TB = Cigarettes

A. Prevalence and Patterns of Drug-Taking Behavior

(1) Opportunity to Try Drugs

Drugs cannot be experienced unless there is an opportunity to try them. Data addressing the opportunity to try drugs conveys an indication of the availability of drugs, what trends in use may be present and, by implication, information about the extent to which those who have a chance to try a drug do so. Table 4-1 describes how many adolescents in the sample indicated having had an opportunity to try any of the different chemical substances, except for alcohol and tobacco. (Figure 4-1 provides a graphic illustration of the findings in Table 4-1.) Both weighted and unweighted results are provided in the table.

A comparison of the actual (unweighted) and projected (weighted) findings indicates that the differences between them tend to be small, suggesting that the actual sample is representative of the population sampled, except for sampling error. The following discussion is therefore based on the unweighted or actual sample results.

What can be observed from the data in Table 4-1 (and from Figure 4-1) is that opportunity to try different chemical substances was fairly pervasive, but with some variations. Marijuana was the drug most in evidence (70.1%), followed by inhalants (44.9%). Just less than two-fifths (39.3%) of the sample reported an opportunity to try cocaine. Concerning crack, a concentrated form of cocaine, less than 10 percent of the sample (8.4%)

reported an opportunity to try it, suggesting that crack may not be generally available in the state. Stimulants were next, with 36.4 percent of the sample having indicated an opportunity to try them. Reports on the opportunity to try the remaining substances were less extensive, but over a quarter of the sample had an opportunity to try hallucinogens (23.1%), and less than a fifth indicated a chance to try depressants (18.6%) or tranquilizers (17.6%). Last among the opportunity to try was heroin, with 7.4 percent of the sample noting an opportunity to try it.

(2) Opportunity to Try and Trying a Drug

An important piece of information related to the opportunity to try a drug is the number of students who actually tried a substance when the chance occurs. Table 4-2 (and figure 4-2) report the percent of students who indicated that they tried a substance when the opportunity arose. As noted from the Table, except for crack and heroin, over half the students tried one of the substances when an opportunity occurred. Consistent with its level of apparent availability, three-quarters (75.9%) of those who had an opportunity to try marijuana did so. Stimulants were the next highest tried substance, with two-thirds (66%) of the sample indicating that they tried it when a chance arose. Over half of those who had a chance to try cocaine (52%), hallucinogens (56.7%), depressants (50.6%), Inhalants (57.1%), or tranquilizers (54.3%), did so.

Based on the findings reported in Tables 4-1 and 4-2, opportunities to try drugs exist in varying degrees, and over half the adolescents who have a chance to try a drug apparently try it. Table 4-3 describes how many students reported having tried any given substance at least once.

(3) Lifetime Experience with a Chemical Substance (Lifetime Prevalence)

Table 4-3 (and Figure 4-3) show the findings related to the percent of students who reported ever having tried any of the substances one or more times during their lifetime (except for alcohol and tobacco). Both weighted and unweighted percent-ages are presented. The differences between the weighted and unweighted figures are relatively small, suggesting that the unweighted sample is representative of the sample population. The following interpretation of the findings is based on the

unweighted data.

As can be observed, over half the students (53.2%) reported having tried marijuana at least once during their lifetime. Marijuana is thus the substance that most students had an opportunity to try, the one that most did try when presented with an opportunity to try, and the one tried most by members of the sample. Conversely, heroin and crack, which were the least available, and least taken advantage of when an opportunity arose, are also least experienced (2% and 2.4% respectively). Of the remaining substances, inhalants were the second most experienced, with a quarter of the sample (25.7%) having indicated at least one experience with an inhalant. Cocaine was tried at least once by just less than a quarter of the sample (24.0%). Hallucinogens were tried by over one-tenth of the sample (13.1%), while tranquilizers (9.6%) and depressants (9.4%) were tried by just less than one-tenth of the students surveyed.

In summarizing the first three tables, it appears that a pattern of use has emerged, one that revolves around using selected drugs to obtain what might be characterized as a 'cheap high.' The three most tried substances, marijuana (a popularized mood altering drug taken to induce a pleasant feeling state), inhalants (cheap and available products such as gasoline), which also produce euphoria, and stimulants (relatively inexpensive substances which induce a high), are all euphoria-inducing substances. Cocaine and hallucinogens, substances that also induce a pleasant altered state of consciousness, are also used, but to a lesser extent. It is possible that their cost, together with a cautiousness about their use due to extensive publicity about their dangers, may be mitigating against more extensive use. Of the remaining substances, depressants and tranquilizers, possibly due to cost and because neither is a particularly good euphoria-inducing drug, are not used extensively. Heroin and crack, which were least experienced, may either be unavailable, too costly, or perceived as substances to avoid.

(4) Lifetime Experience and 95% Confidence Intervals

Table 4-4 presents the lower and upper confidence intervals for the statistics describing lifetime experience with a drug reported in Table 4-3.

Table 4-4
 Lifetime Experience with a Chemical Substance
 with 95% Confidence Intervals
 Unweighted Frequencies
 Total Sample
 1988
 (n=4129)

<u>Substance</u>	<u>Lower Limit*</u>	<u>Percent</u>	<u>Upper Limit*</u>
Marijuana	51.7	53.2	54.7
Cocaine**	13.3	14.4	15.5
Stimulants	22.7	24.0	25.3
Hallucinogens	12.0	13.1	14.2
Depressants	8.5	9.4	10.4
Heroin	1.7	2.0	2.4
Inhalants	24.4	25.7	27.0
Tranquilizers	8.6	9.6	10.6

*95% Confidence Intervals. **Includes Crack.

The prevalence data represent the unweighted sample figures. The confidence intervals have been included in order to show the range around which the actual population value may lie 95 out of one hundred times ($p < .05$).

(5) Lifetime Experience: Total Number of Students Having Tried One or More Drugs

Figure 4-4 indicates that out of the total 1988 sample of 4,129 students, 59.9 percent, or three-fifths of the students surveyed, reported having tried one or more drugs at least once during their lifetime. Although lifetime prevalence is a high, it needs to be noted that lifetime experience includes students who tried a drug once and stopped, and those who had used more than one substance more than one time, without accounting for recency of use.

(6) Past Year Experience

The above findings changes dramatically when experience during the past year is reported. As shown in Figure 4-5, less than a quarter of the

Figure 4-4
Lifetime Experience with One or more Drugs
Total Sample
1988
(n=4129)

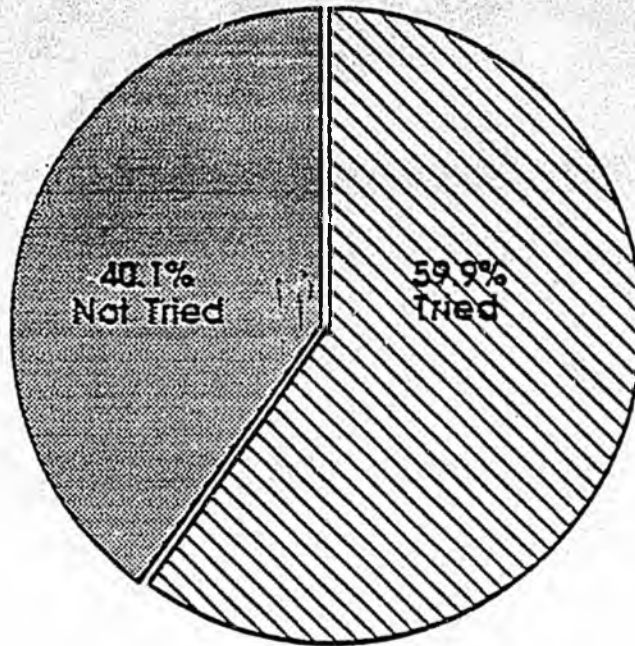
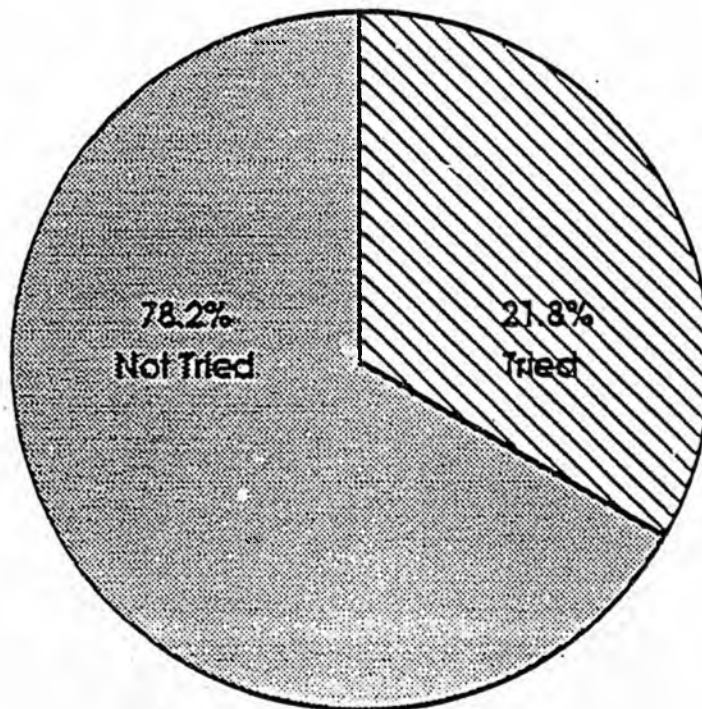


Figure 4-5
Past Year Experience with One or More Drugs
1988

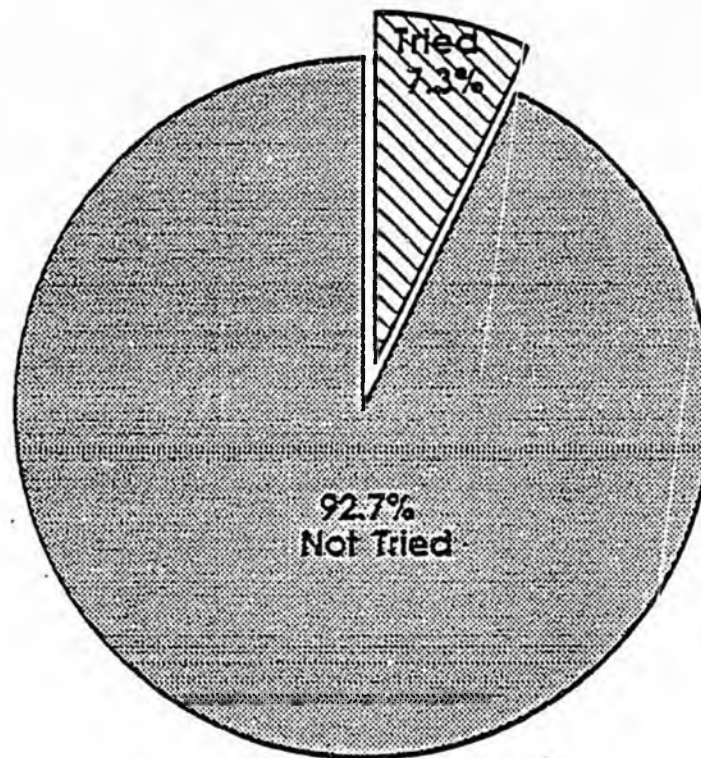


sample (21.8%) indicated having experienced any substance during the past year.

(7) Past Month Experience

A further substantial decrease is noted for past month use (Figure 4-6), with less than ten percent (7.3%) of the students having indicated using a drug during this time period.

Figure 4-6
Past Month Experience with One or More Drugs
1988



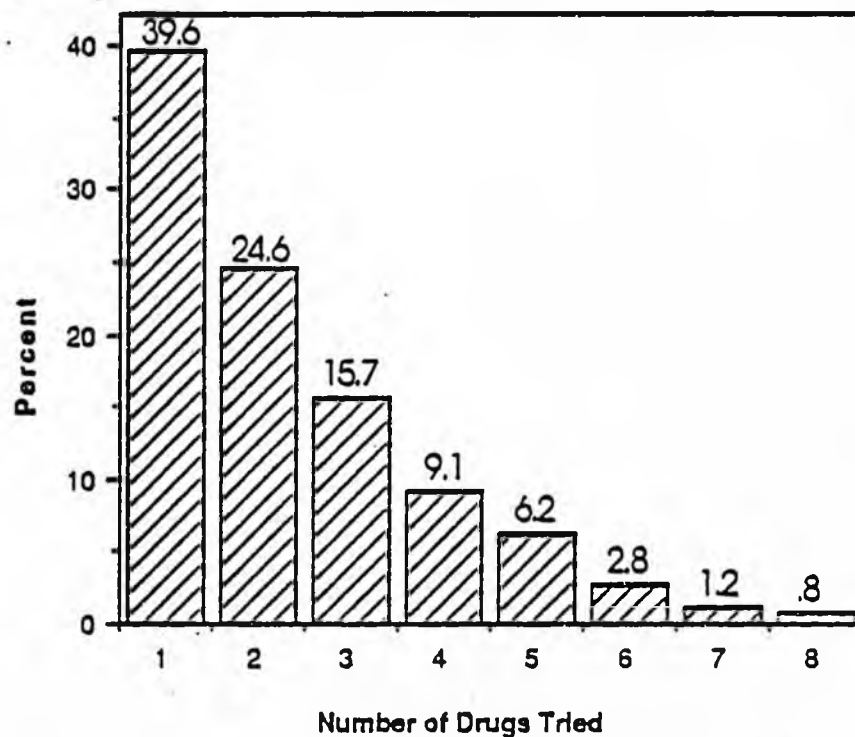
Different drug experience results occur when different time periods are referenced (Figures 4-4 to 4-6). Lifetime experience yields the highest prevalence because it encompasses all forms of use, experimental or regular, during a student's lifetime. Past year use provides a more recent picture which does not include students who experimented with drugs more than a year ago and stopped, or who were more frequent users but also stopped. What the findings reveal is that there is a substantial difference between those who ever tried a drug, and those who had a more recent drug experience.

This difference becomes even more pronounced with respect to use during the past month. These data provide an estimate of students who are actively involved in drug use, which amounts to only 7.3 percent of the sample.

(8) Number of Drugs Tried

Figure 4-7 describes how many students tried one or more drugs. Inspection of the data reveals that the largest percentage of students who had experiences with drugs restricted their experience to only one drug (39.6%). The proportion of students who experienced two or more drugs decreases steadily thereafter. A quarter of the sample (24.6%) experienced two drugs, while 15.7 percent tried three drugs. Less than 10% four drugs (9.1%), and a total of ten percent (10.2%) tried 5 to 7 drugs. Less than 1% of the total sample (0.8%) of those who tried drugs indicated having experienced all eight of the drugs listed in the survey.

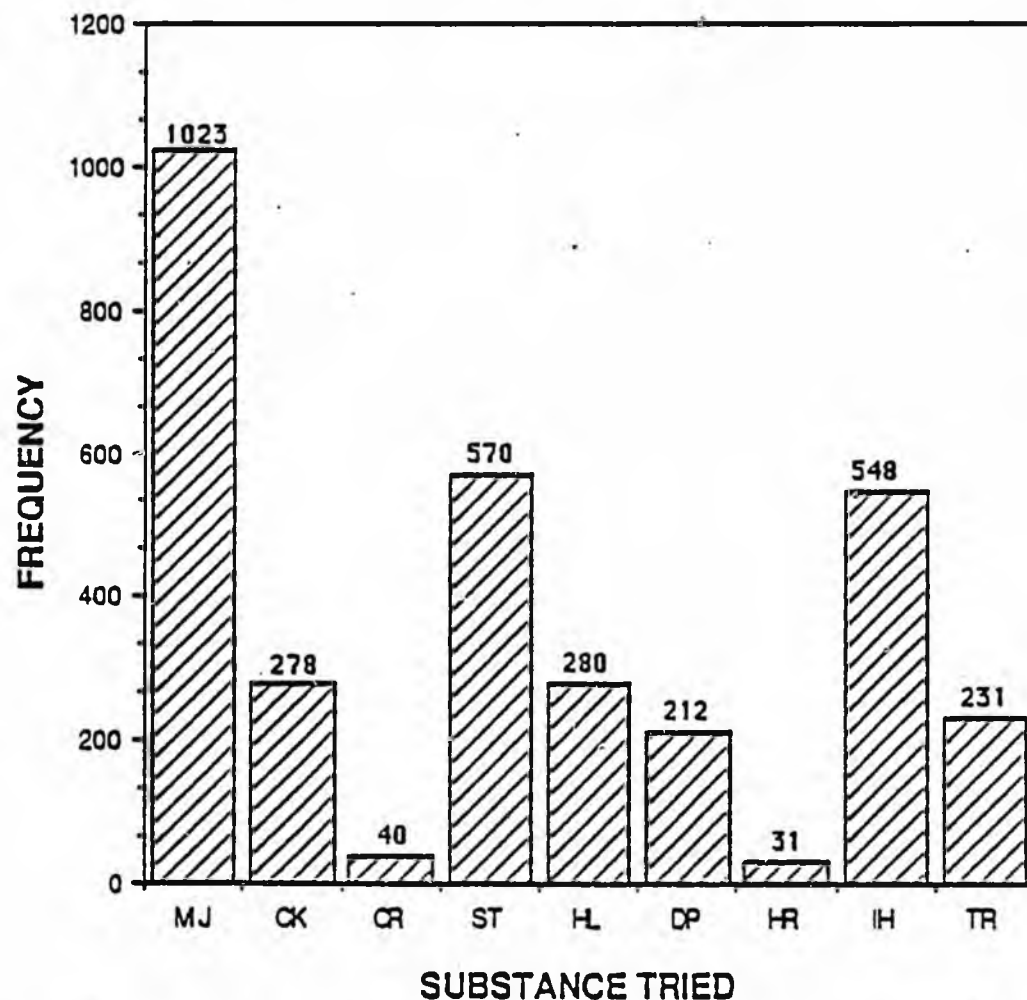
Figure 4-7
Number of Drugs Tried
Among Students Having Tried
1988
(n=2475)



(9) Drugs Experienced

Thus far the discussion has been reporting students' experience with one or more drugs. Figure 4-8 shows the actual number (frequency) of students who tried a single substance to the exclusion of others. Inspection of the data shows that the greatest number of students ($n=1,023$) restricted their experience to marijuana. About an equal number limited their experience to having tried stimulants ($n=570$) or inhalants ($n=548$), which ranked second and third, respectively. Least tried were crack ($n=40$) and heroin ($n=31$). Experiences with cocaine, hallucinogens, depressants, and tranquilizers, were relatively comparable. The overall configuration generally follows the pattern of use described above.

Figure 4-8
Frequency of Experience With a Single Drug
1988

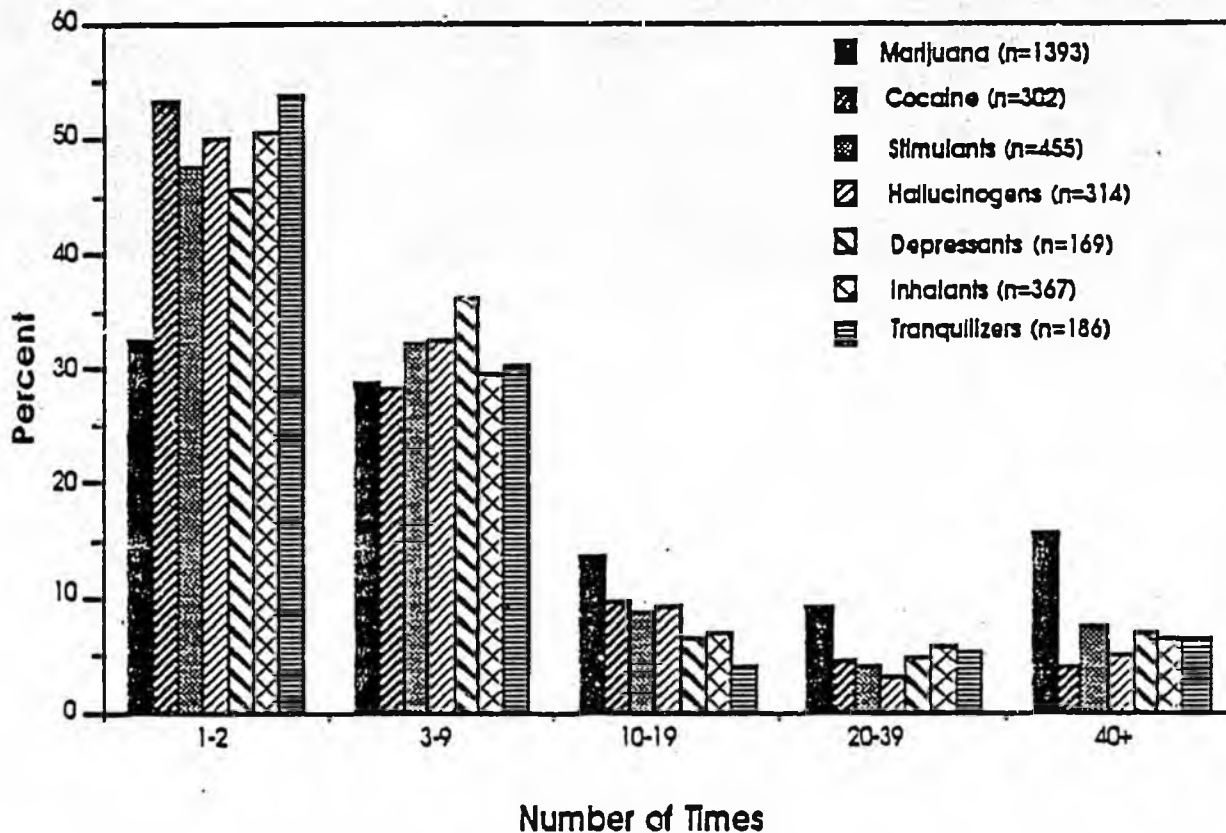


(8) Past Year Experience

Figure 4-9 shows the distribution of reports of the frequency of use of

seven different chemical substances during the past year (prior to having been surveyed). Heroin, because of its low prevalence, was not included. The figures in the legend next to each drug listed represent the actual number of respondents who indicated having tried each of the substances during the past year.

Figure 4-9
Past Year Experience with Chemical Substances
1988



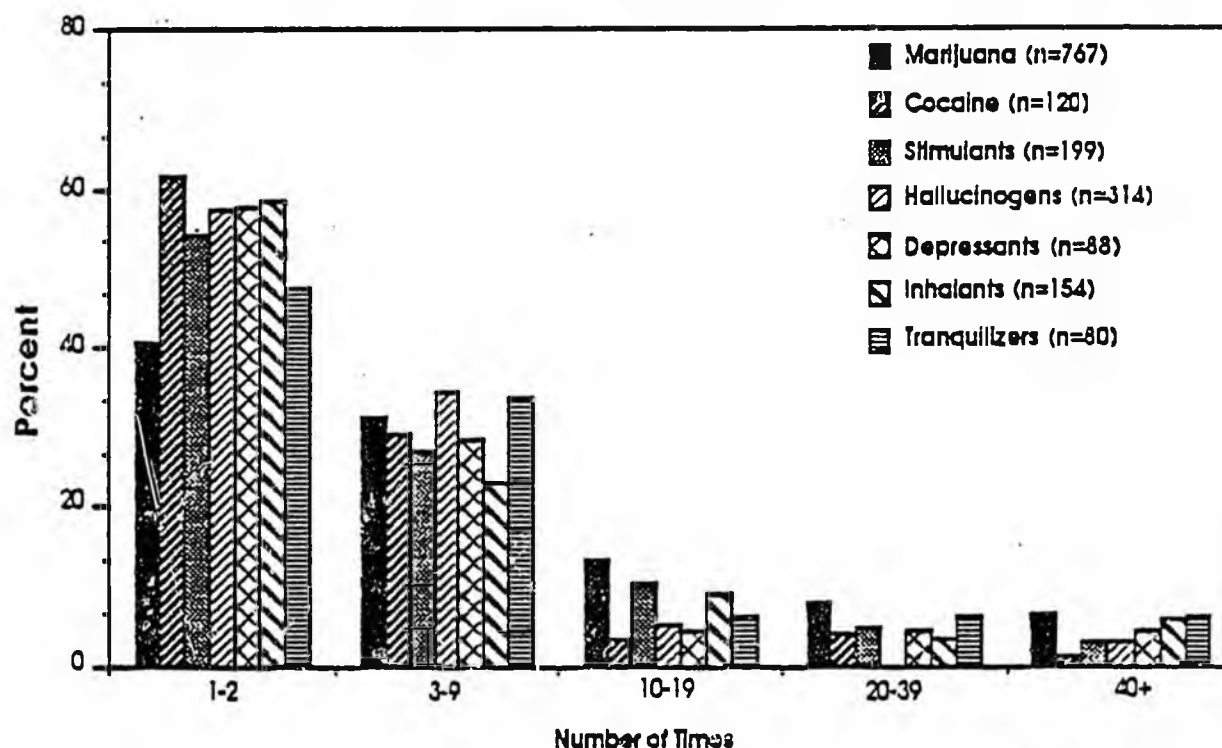
Foremost among the findings is that experimentation (1-2 times) with the different substances appeared to have been the primary mode of use. Over 50% of the students tried either cocaine or tranquillizers once or twice, while close to 50 percent tried either stimulants, hallucinogens, depressants, or inhalants. Interestingly, marijuana was the least experimented with drug (<35%). Between 30 and 35 percent of the students used drugs between 3 and 9 times, and thereafter the report of use begins to decline. Of interest, however, is the pattern of use. There is a clear trend of less experimentation and more frequent use of marijuana, with about 15 percent of the sample indicating having used marijuana more than 40 times during the past year. In contrast, there is greater experimentation with the other

substances and less frequent use. About ten percent of those who tried a substance, however, tend to have been frequent users of one or more of the drugs listed in the figure.

(11) Past Month Experience

Figure 4-10 presents the same information as in Figure 4-9 but shows the frequency of use during the past month. The findings indicate that drugs were used recently, and generally follows the pattern found in Table 4-9. Of particular significance in this Table is that about five percent of the students appear to be active and moderately heavy (20-39 times) or heavy (40+ times) users of marijuana, inhalants and tranquilizers. The latter figure represents greater than daily use of drugs by some students.

Figure 4-10
Past Month Experience with Chemical Substances
1988

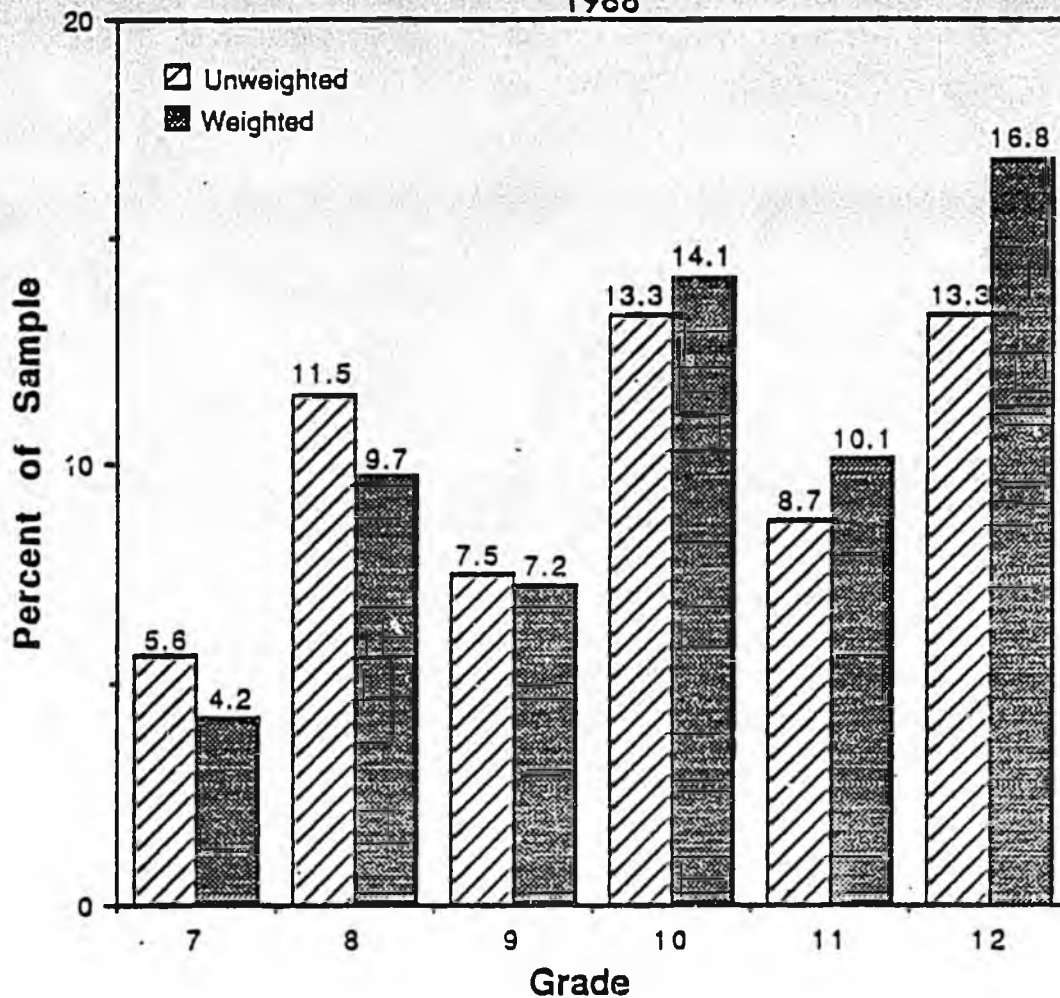


(12) Experience by Grade Level

Figures 4-11 through 4-13 present findings related to grade level and drug use.

Figure 4-11 shows a comparison of weighted and unweighted results of the percent of students, from among the entire sample, who have tried

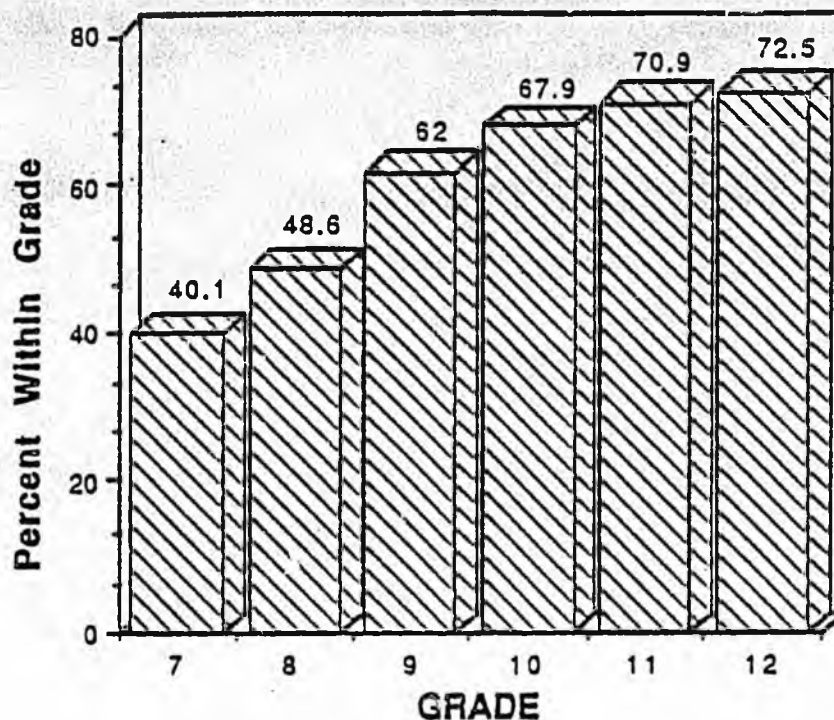
Figure 4-11
Lifetime Experience and Grade Level
Comparison of Weighted and Unweighted Results
Total sample
1988



one or more drugs (except alcohol and tobacco) either before or during they have reached their current grade level. The data were weighted to account for differences in grade levels among the school districts. Although there are some relatively small differences between the weighted and unweighted data, the overall pattern is nevertheless similar. What is revealed is a pattern of use in which grades 8, 10, and 12 show higher prevalence levels than students in grades seven, nine, and eleven. More specifically, prevalence levels are lowest in grade 7, rise in grade 8, decrease in grade 9, increase again in grade 10, decrease in grade 11, and increase in grade 12. It thus appears that students may be at higher risk for drug use within grades 8, 10, and 12 than in grades 7, 9, and 11.

The data in Figure 4-12, which are based on a weighted sample to

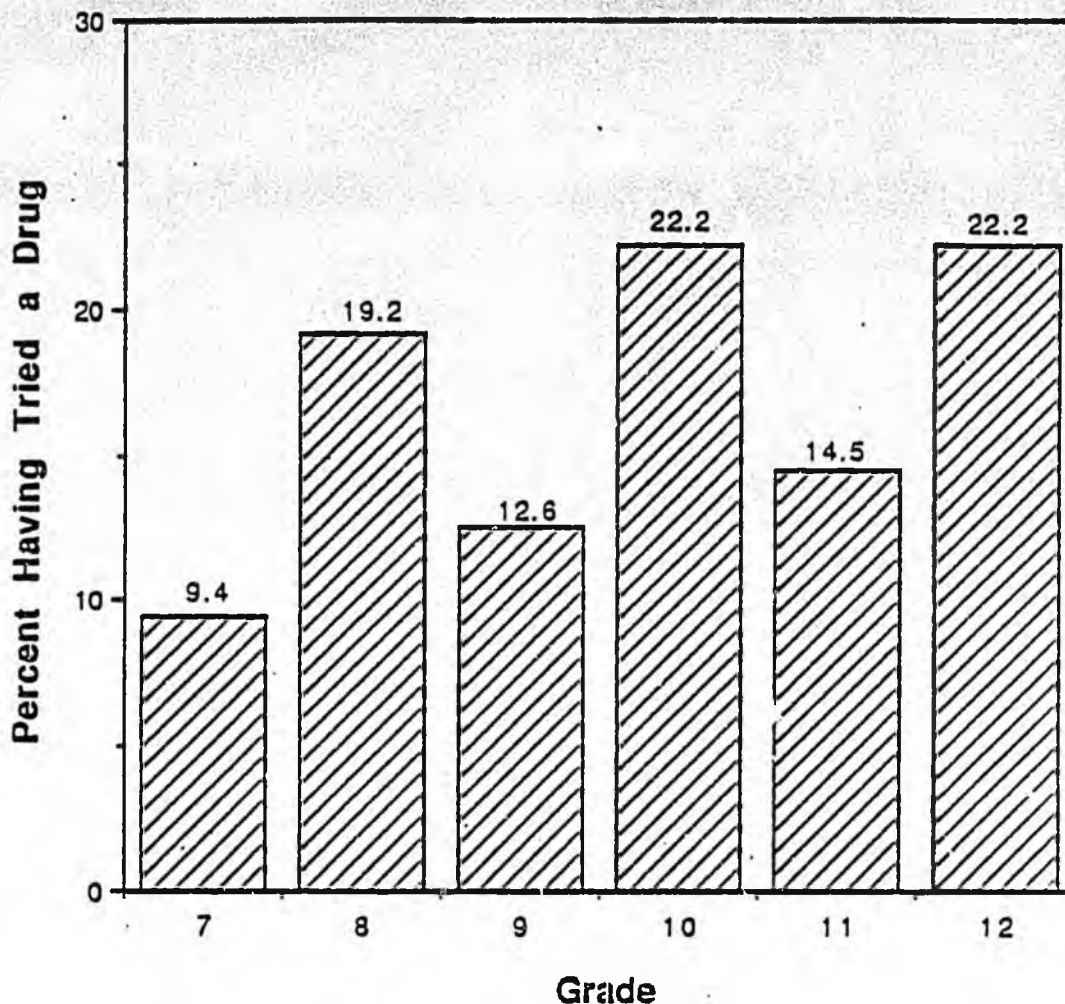
Figure 4-12
Lifetime Experience Within Grade Levels
Weighted Sample
1988



account for differences in the number of students within grade levels, represents the percent of students within each grade level who reported having tried a drug (i.e., the actual number of students among all seventh graders who tried a drug). Figure 4-12 shows a different pattern of drug use with respect to grade level and use than found in Figure 4-11 because the data for each grade level would total 100% if those not using drugs were included. (The data in Figure 4-11 is based on the proportion of students within each grade from among the total sample who reported ever having tried a drug.) This configuration indicates a rather direct relationship between grade and use: As grade level increases, the number of students having tried increases. By the time students are in the ninth grade, or higher, at least three-fifths have tried a drug, and by the time students become high school seniors nearly three-quarters have tried one or more drugs.

Shown in Figure 4-13 are the findings pertaining to the percent of students within each grade among who tried a drug either before or during their current grade level. The overall configuration is similar to that shown in Figure 4-12.

Figure 4-13
Lifetime Experience Within Grade Levels Among
Students Having Tried A Drug
1988
(n=2475)



(13) Age of initiation

Figures 4-14 through 4-17 present information related to age of initiation into drug-taking behavior for seven substances. Heroin and crack were not included because of their low prevalence rates. Figure 4-14 shows the ages of initiation for seven substances: marijuana (MJ), cocaine (CK), stimulants (ST), Hallucinogens (HL), Depressants (DP), inhalants (IH), and tranquilizers (TQ). From this table it appears that although some youth are beginning drug use at or before 11 years of age, the most common time for initiation into each type of drug is between 12 and 13 years. Except for inhalants, which decrease after age 12, there is a sharp increase in initiation between 11 and 13 years. Thereafter some drugs continue to peak, some decline, while others show a brief plateau. Initiation into all substances begins to decline after age 15.

Figure 4-14
Age of Initiation
1988

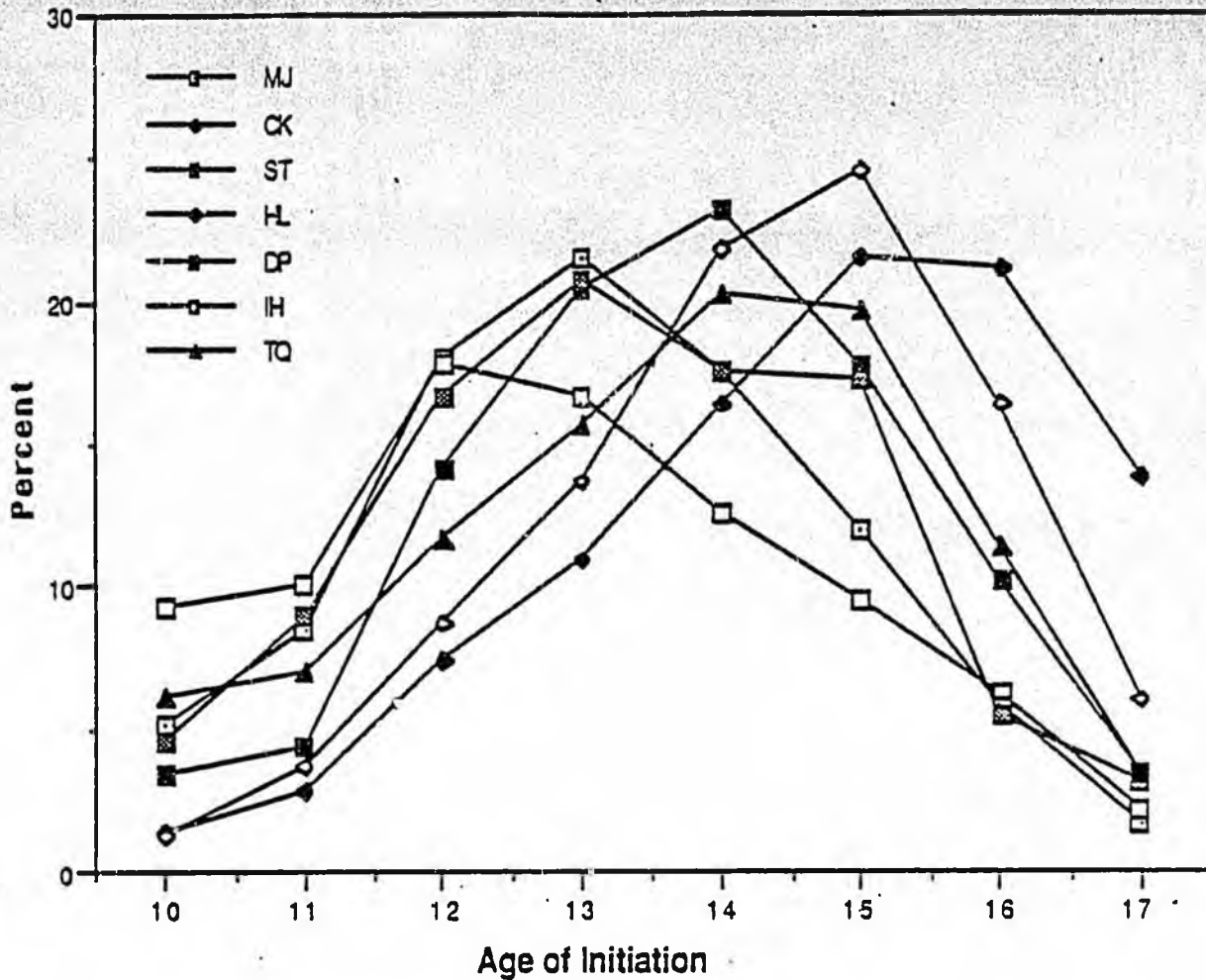
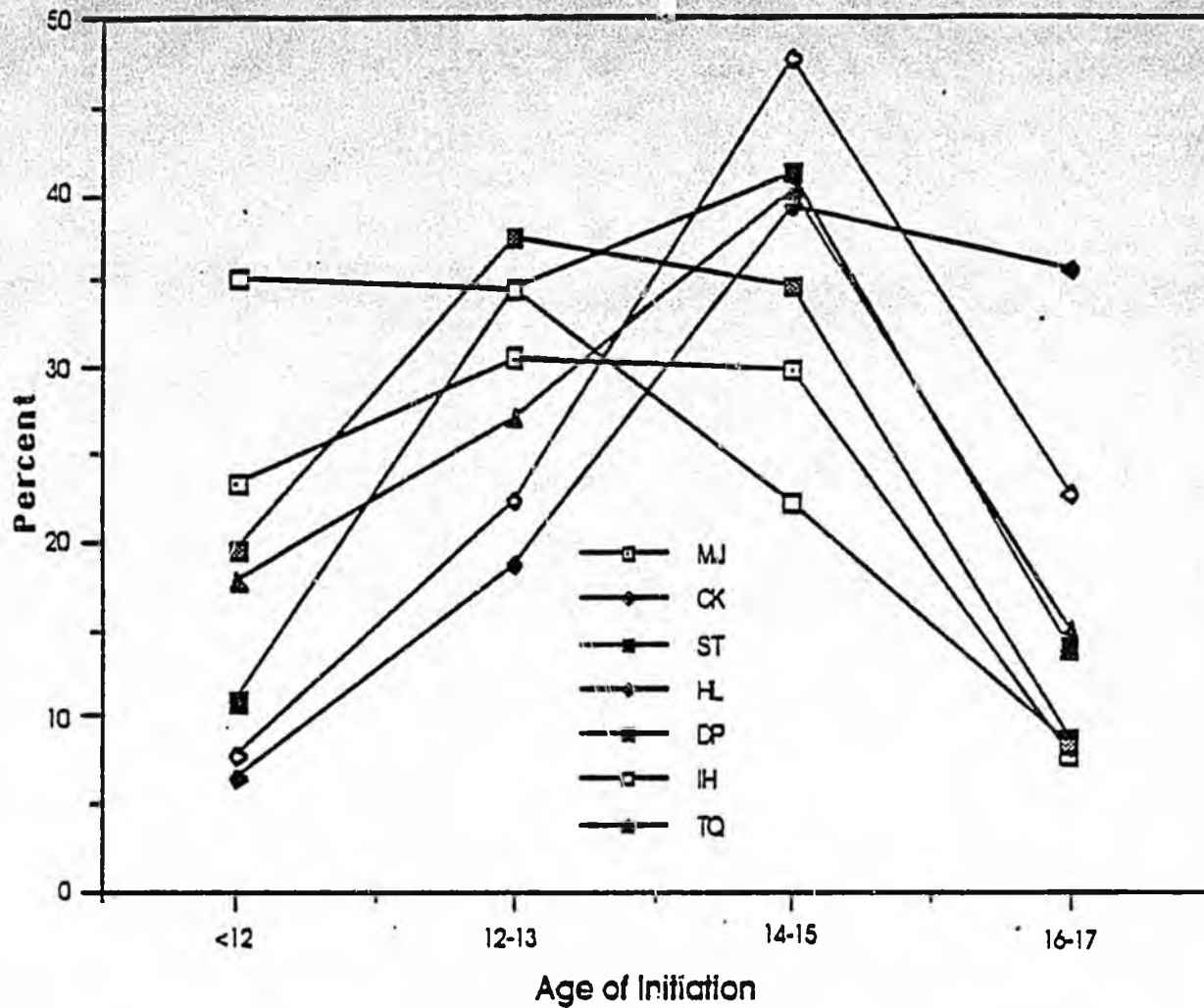


Figure 4-15 shows the same data Figure 4-14, but the ages are grouped into two-year intervals. The increase in initiation up to age 13 is dramatically illustrated by the sharp rise in the slope of the line for each drug from less than 12 years to between 12-13 years. Thereafter initiation into hallucinogens and cocaine continues to increase very sharply. What is of particular concern is the large number of students (about 35%) who have tried inhalants before they are twelve. Over 20 percent of the students had also tried marijuana, while initiation into depressants and tranquilizers is also relatively high.

Figure 4-16 shows a direct comparison of the age of initiation by age groupings for marijuana, cocaine, stimulants and inhalants, the four most prevalent substances tried by members of the sample. What may be observed more clearly from this table is that while many students try

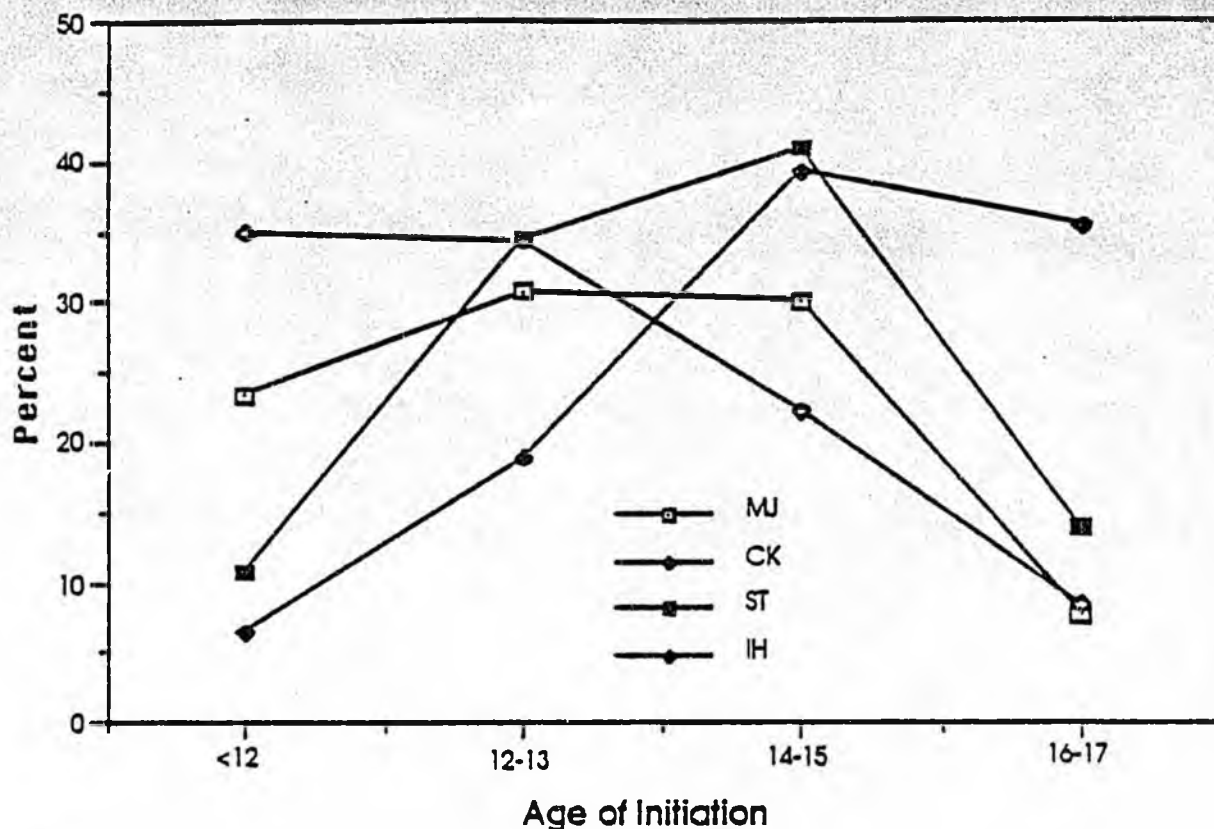
Figure 4-15
Age of Initiation
1988



inhalants at an early age (<12), its initiation begins to decline thereafter. But as initiation into inhalants declines, initiation into marijuana, stimulants, and cocaine increase. The most dramatic increase occurs for cocaine, which rises sharply between 12-13 and 14-15 years, and remains high at 16-17 years. Marijuana tends to stay steady between 12-13 and 14-15 years and then declines. Stimulants also increase sharply up to 12-13 years, then less slowly until 14-15 years, and then declines rapidly.

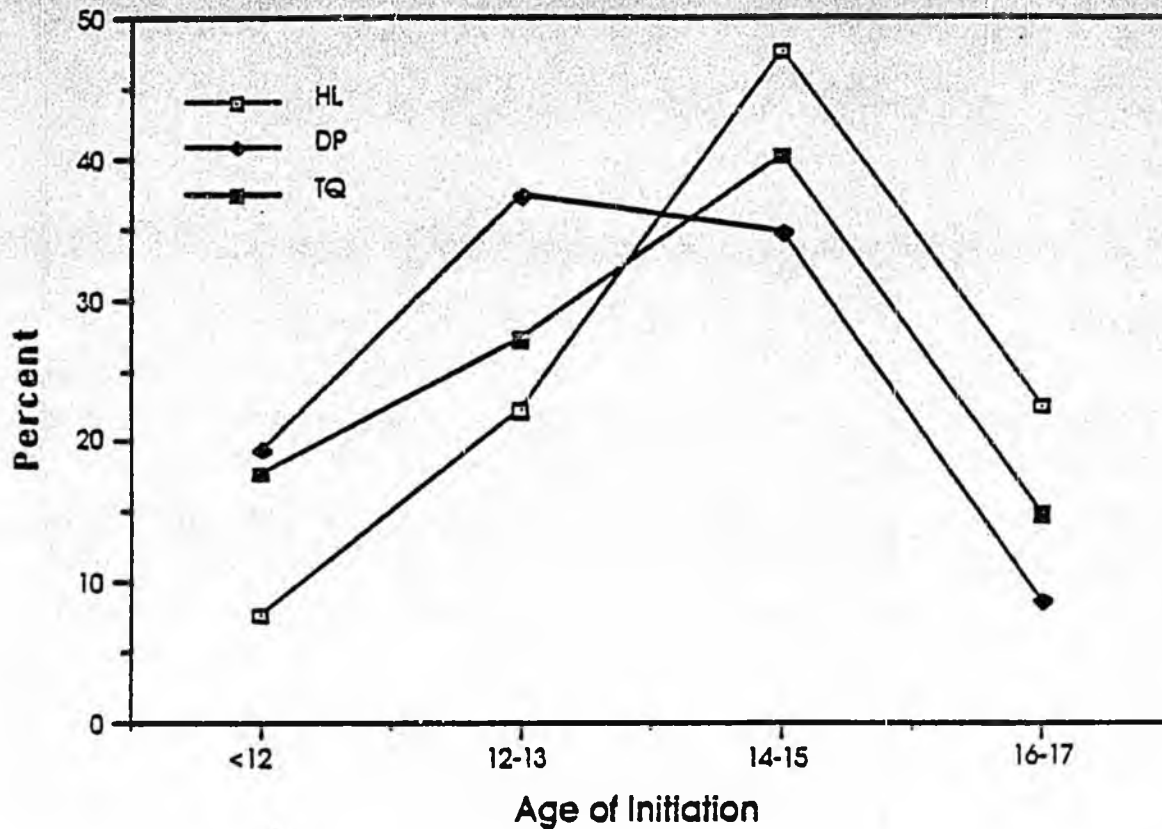
Shown in Figure 4-17 are initiation rates by age groupings for hallucinogens, depressants, and tranquilizers. Among these substances, hallucinogens show the most dramatic increase, peaking at 14-15 years then declining rapidly. Depressants increase up to 12-13 years, then begins to decline thereafter, while tranquilizers tend to show a steady increase up until age 14-15, and a rapid decline thereafter.

Figure 4-16
 Age of Initiation
 Marijuana - Cocaine - Stimulants - Inhalants
 1988



In summary, of the findings on initiation into drug-taking behavior, it is evident that the period between 12 and 13 years presents the greatest risk for initiation into or experimentation with drugs. Subsequent to age 13 initiation continues to increase for some substances, while it decreases for others. The major exception to this pattern is initiation into cocaine, which peaks at age 15, and remains high through 17 years of age. It thus appears that students may have started to try cocaine after other substances were tried first. Additionally, there is a uniform trend showing a decrease in initiation subsequent to age 15.

Figure 4-17
 Age of Initiation
 Hallucinogens - Depressants - Tranquilizers
 1988

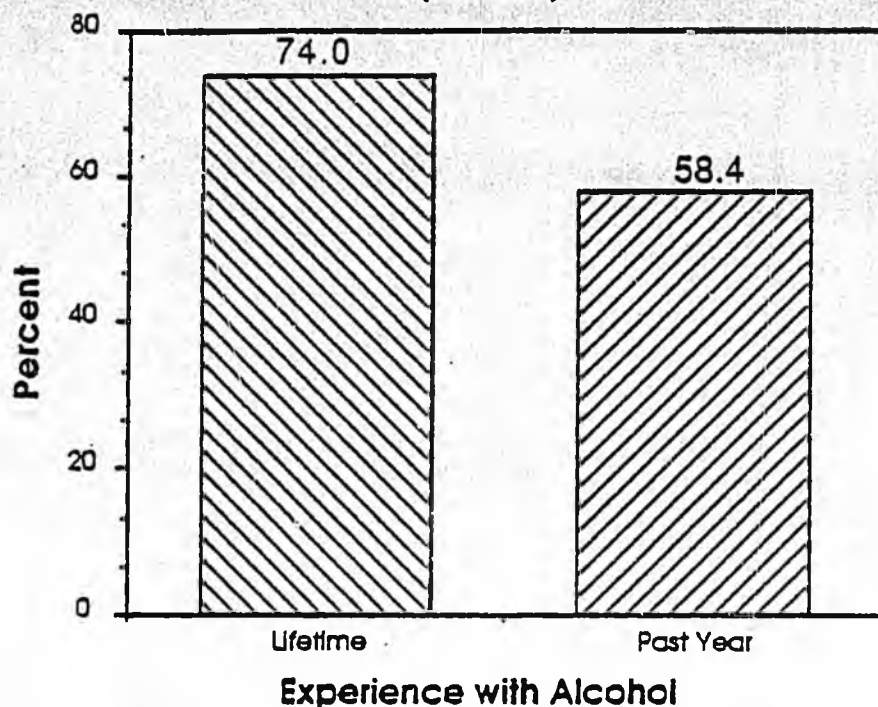


 (14) Alcohol: Lifetime and Past Year Prevalence

Findings concerning alcohol or drinking behavior among the sample have been separated from the results pertaining to other drugs in order to discuss each as separate entities.

Figure 4-18 indicates the proportion of students who had ever consumed alcohol outside their home with friends, and the percent of students who had reported drinking alcohol beverages during the past year. Approximately three-quarters of the sample (74%) had indicated that they had consumed an alcoholic beverage during their lifetime, and close to two-thirds of the sample (58.4%) noted that they had consumed an alcoholic beverage during the past year.

Figure 4-18
Experience with Alcohol
Total Sample
1988
(n=4129)



(15) Frequency of Drinking: Past 30 Days

Figure 4-19 shows the number of occasions students used alcohol during the past thirty days (prior to having been sampled). The data in the table are derived from those students who reported ever having consumed alcohol (n=2292). It is apparent from the data in Figure 4-19 that the majority of students who drank did so only 1-3 times (44.3%). Fewer (13.8%) drank 1-2 times a week, and less (6.8%) used alcohol 3-4 times a week. Cumulatively, 3.7% of the students drank more than 5-6 times a week. Thirty-one percent of the students reported that they did not drink any alcoholic beverages during the past 30 days.

(16) Quantity of Drinking: Past 30 Days

Among those who drank during the past 30 days (n=2633), the majority (35.9%), as shown in Figure 4-20, consumed 2-5 drinks. Over ten percent had 6-10 drinks, while 7.1 percent had 11 or more drinks. About a third of the students (32.2) did not drink, while 11.6 percent had only one drink.

Figure 4-19
Frequency of Drinking Past Thirty Days
1988
(n=2962)

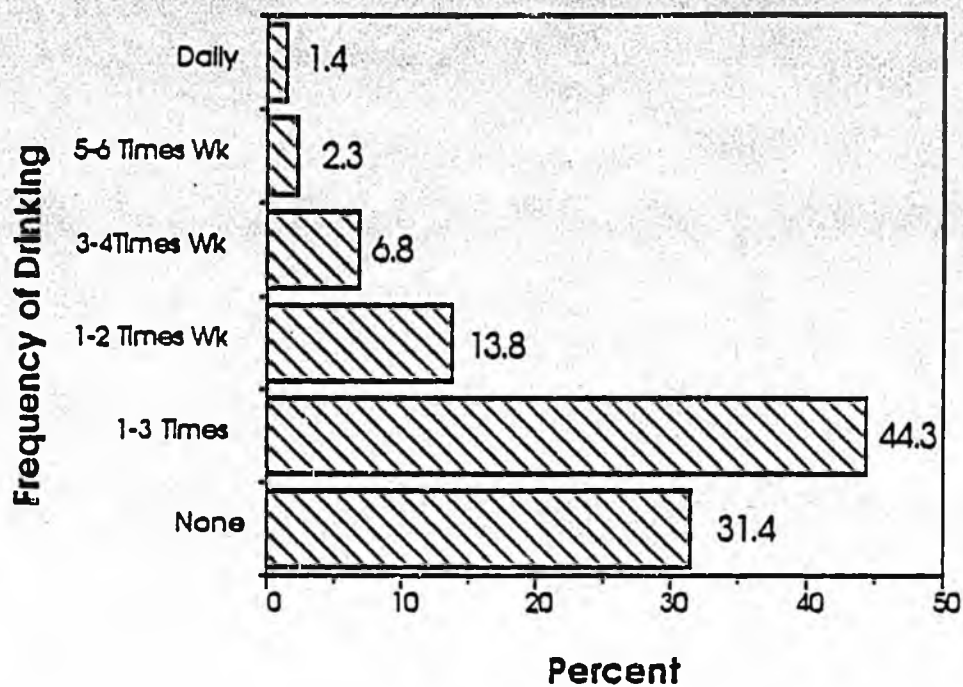
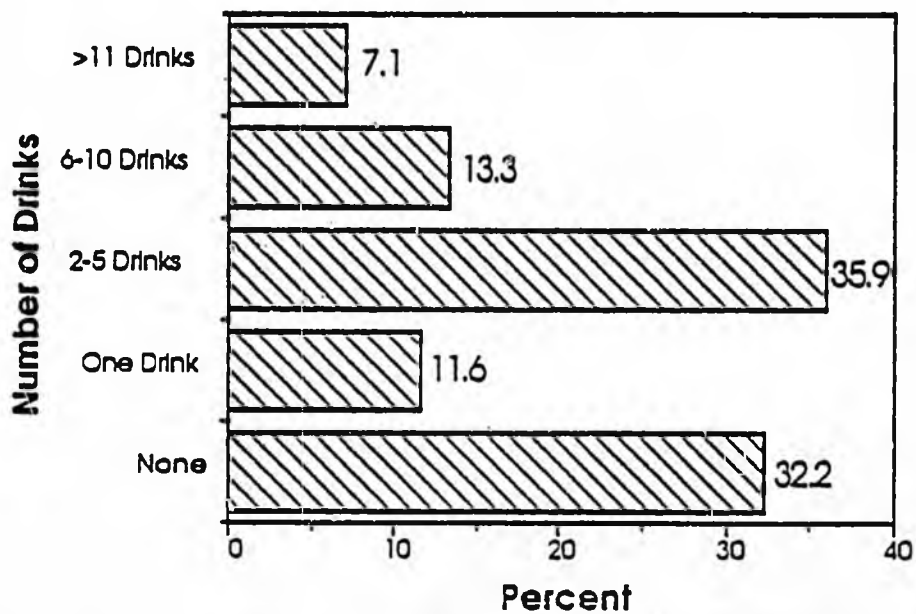


Figure 4-20
Amount of Drinks Consumed
Past Thirty Days
1988
(n=2633)



(17) Alcohol and Grade Level

Figure 4-21 describes the percent of students, from among the total sample and based on unweighted data, who reported having consumed alcohol prior to or at their current grade level. The configuration is identical to the pattern observed in Figures 4-11 and 4-13 for use of drugs. Grades 8, 10 and 12 all show peaks or increases, while grades 7, 9 and 11 show decreases. The similarity of these findings reinforces the notion that certain grades may be more critical than others with respect to use of alcohol and other drugs.

Figure 4-21
Lifetime Experience With Alcohol By Grade
Total Sample
1988
(n=4129)

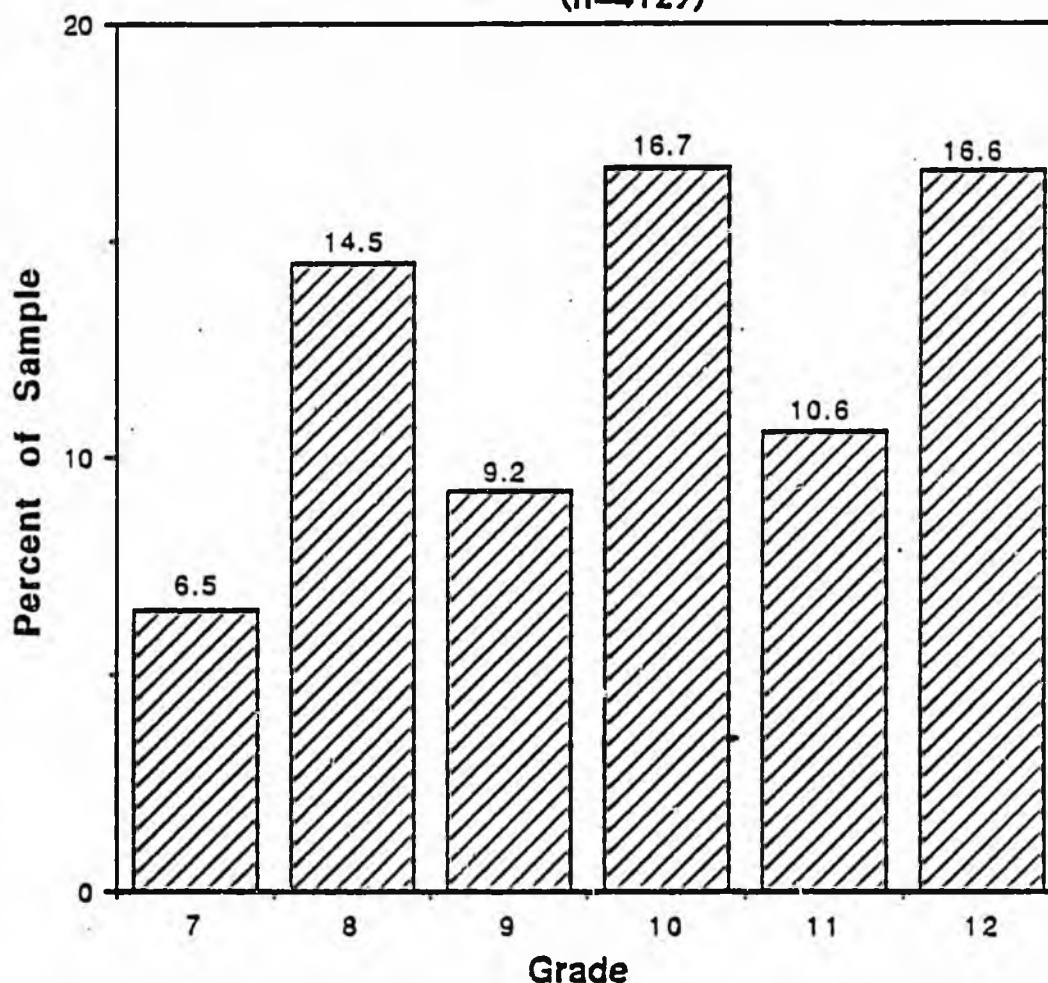
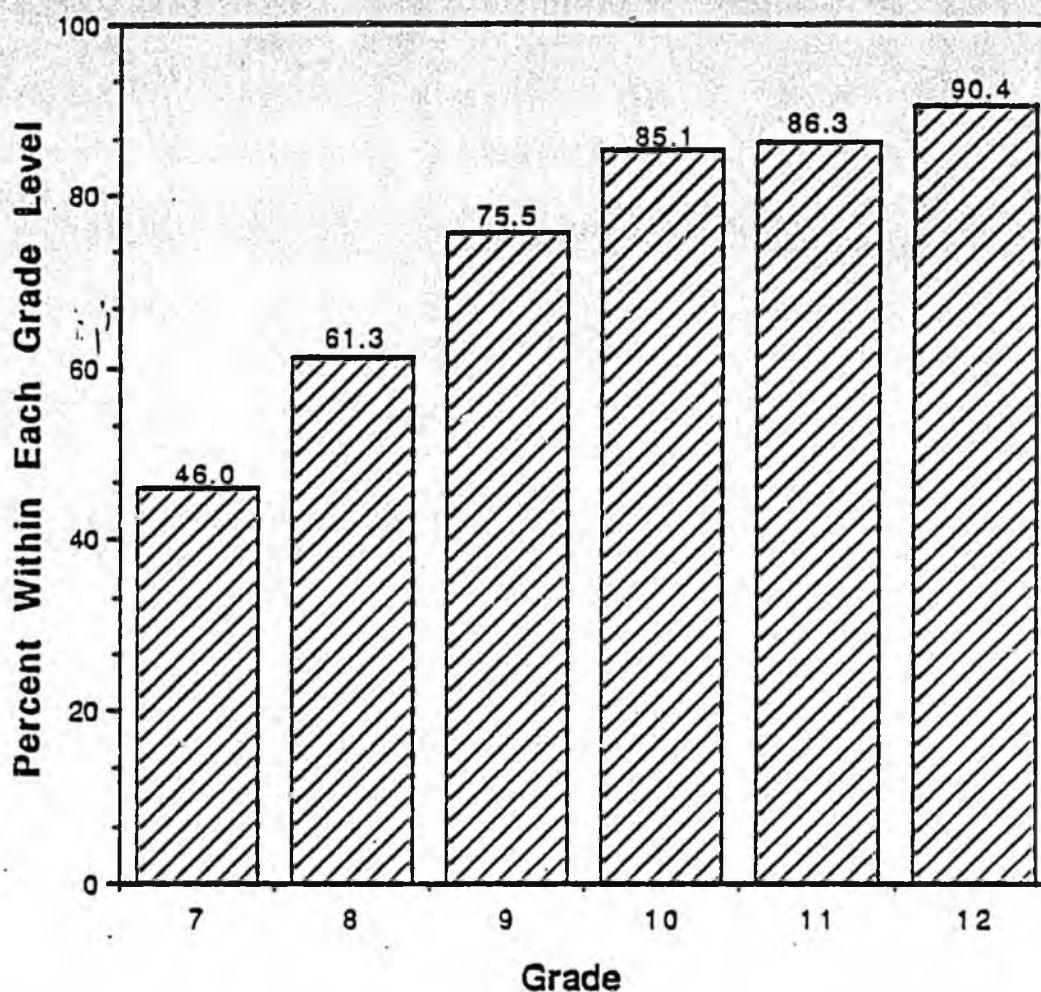


Figure 4-22, which reports lifetime prevalence with alcohol within each grade level, shows a similar configuration to that in Figure 4-12. As is shown, as grade level increases, a greater proportion of students drink alcohol.

Figure 4-22
Lifetime Experience With Alcohol Within Grade Levels
1988
(n=3057)



(18) Cigarettes and Smokeless Tobacco

Figure 4-23 presents data on the prevalence of smoking cigarettes and on the use of chewing or smokeless tobacco. Slightly over three-fifths (61.9%) of the sample have smoked cigarettes, and over a third (38.4%) have tried either smokeless or chewing tobacco at least once.

(19) Frequency of Smoking: Past 30 Days

The frequency with which students reported smoking is described in Figure 4-24. Interestingly, of those who reported ever having tried smoking, over half (55.5%) did not smoke during the past 30 days. Among those who did smoke, it appears that they can be divided into two primary groups, one which tends to smoke infrequently (less than 4 times a week (19.0%)), and another of equal amount who tend to be heavier smokers

(two-three times a day or more (21.8%)).

Figure 4-23
Use of Tobacco Products
Lifetime Experience
Total Sample
1988
(n=4129)

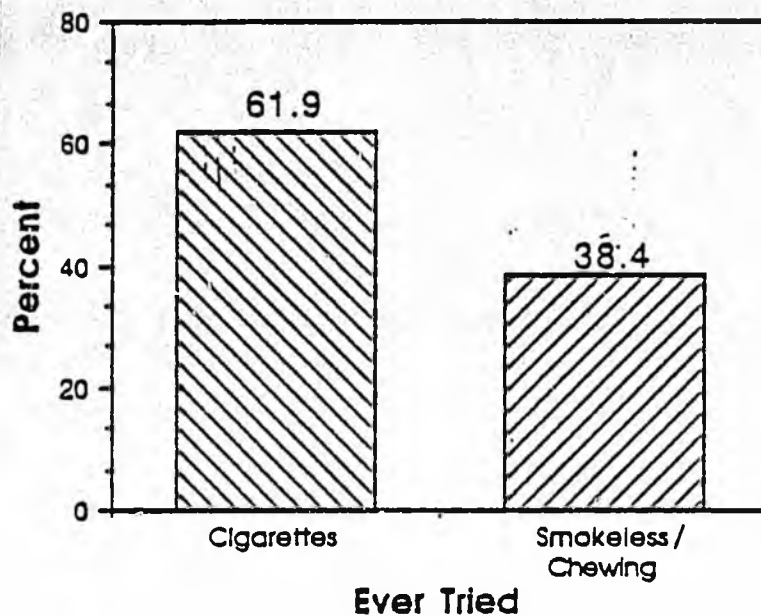
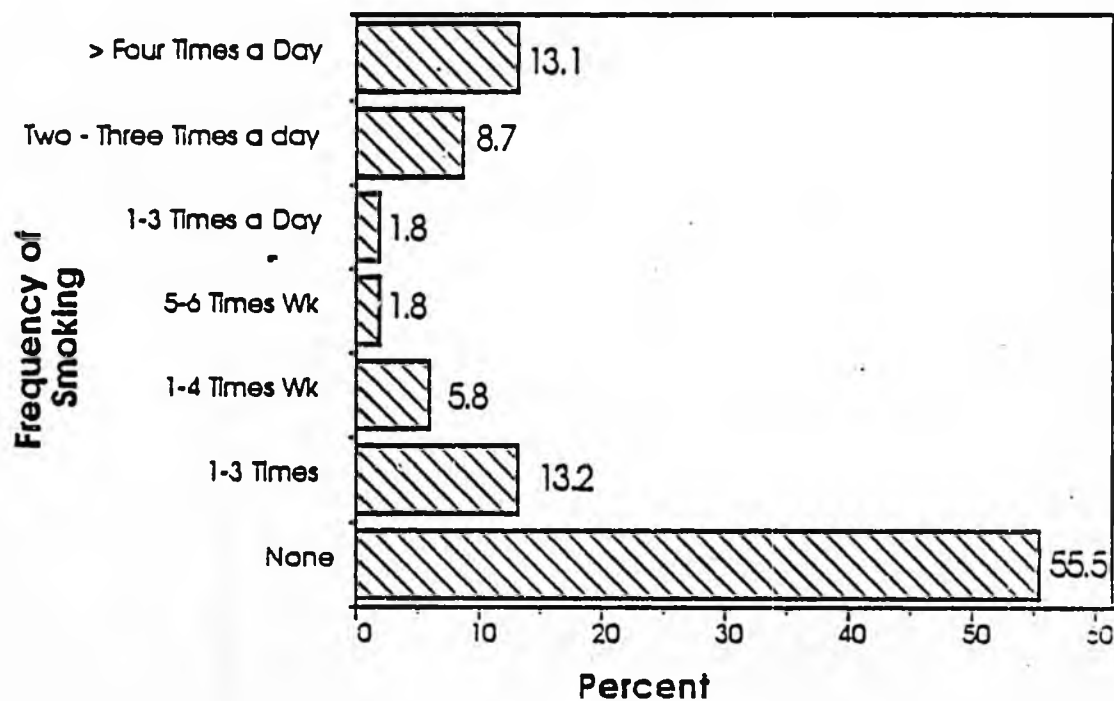


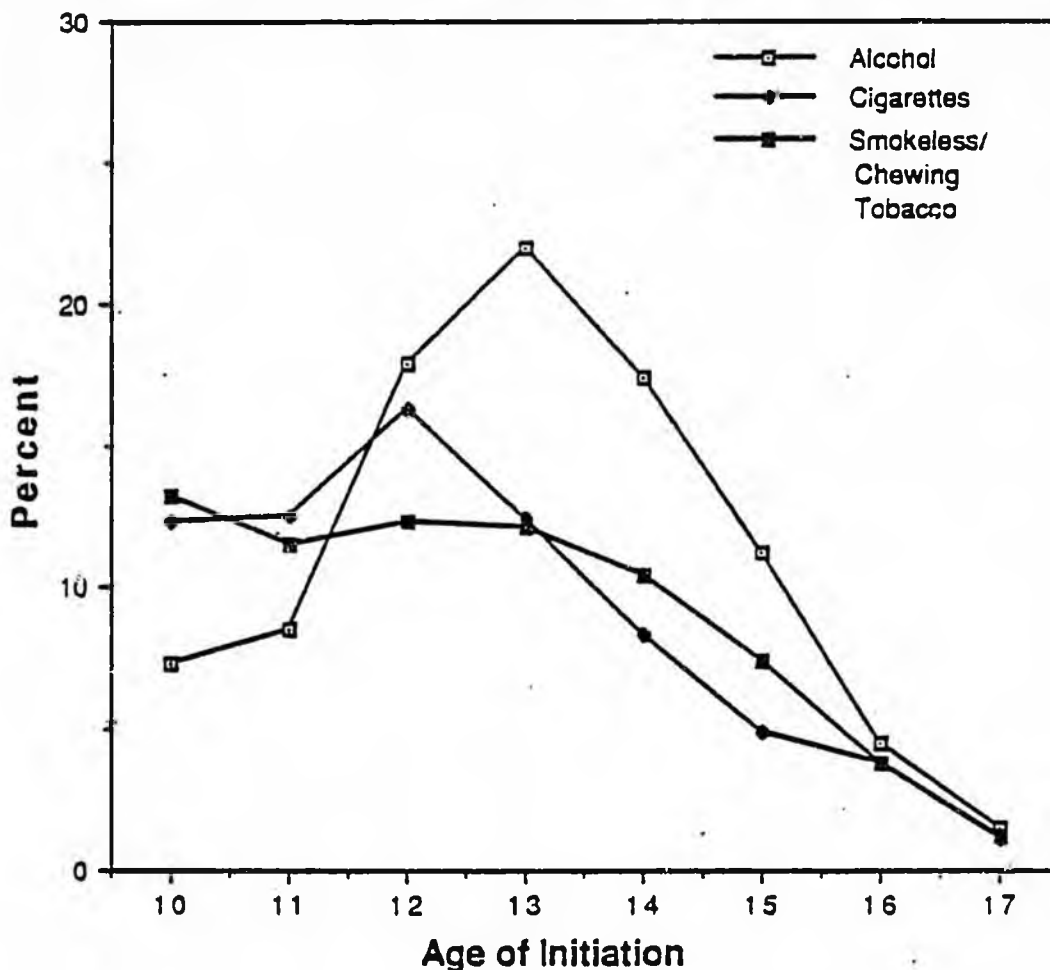
Figure 4-24
Frequency of Smoking Past Thirty days
1988
(n=2381)



(18) Initiation into Alcohol, Cigarettes, and Smokeless/Chewing Tobacco

A comparison of ages of initiation into alcohol, cigarettes, and smokeless or chewing tobacco is shown in Figure 4-25. A higher percentage of students are initiated into tobacco products than alcohol at ages 10 and 11, but thereafter initiation into alcohol increases steadily until age 13, and decreases thereafter. Initiation into tobacco products declines steadily after peaking at 12 years of age. Although a large number of students have reported smoking cigarettes or using smokeless or chewing tobacco (see Figures 4-23 and 4-24), their use would appear to have its largest occurrence prior to age 13.

Figure 4-25
Age of Initiation
Alcohol-Cigarettes-Smokeless/Chewing Tobacco
1988

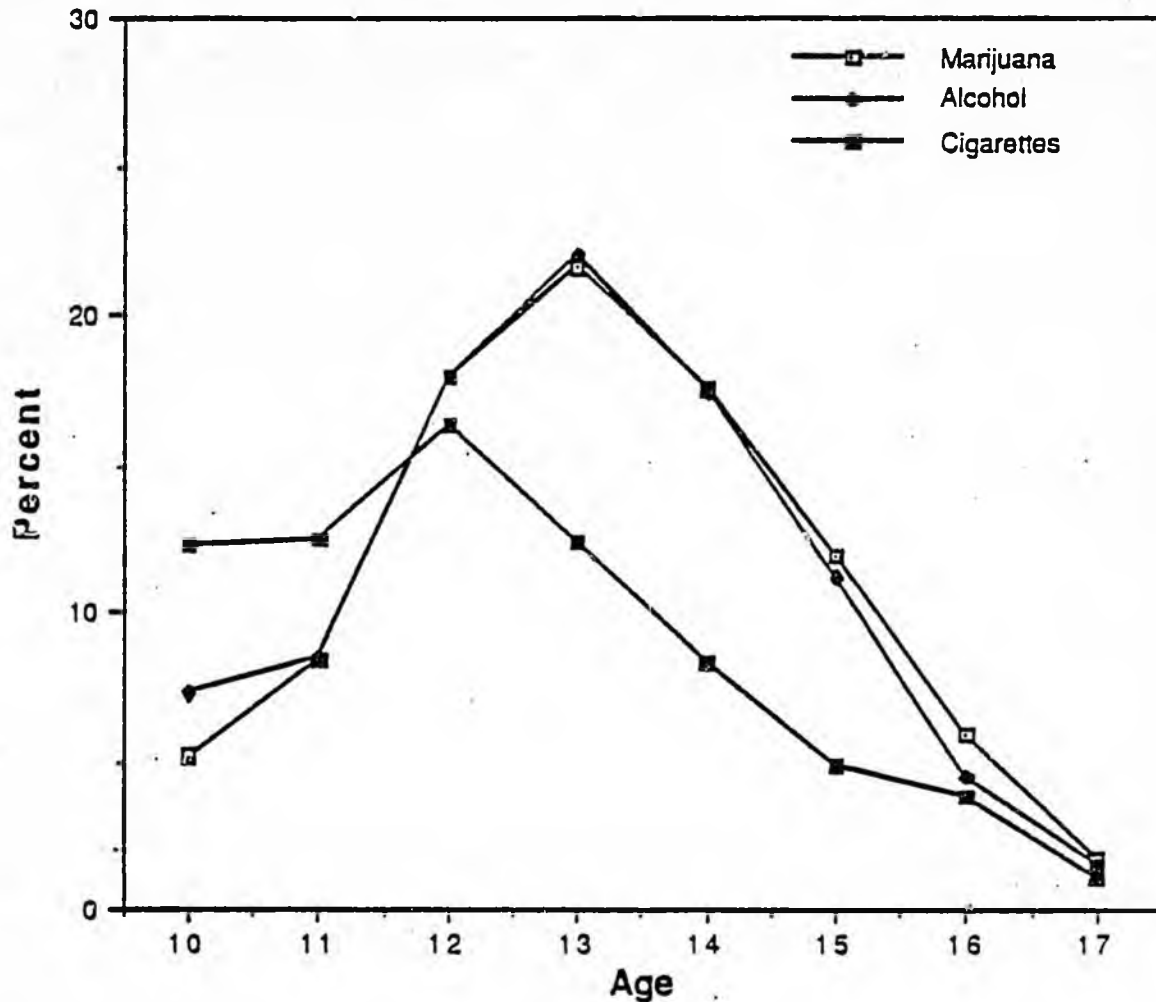


(21) Initiation into Alcohol, Cigarettes and Marijuana

Figure 4-26 provides a comparison of age of initiation into alcohol, cigarettes and marijuana, three of the most widely used substances by

the students in the sample. Although more students start using cigarettes than either alcohol or marijuana at ages 10 or 11, its initiation declines very sharply after peaking at age 12, the age level when initiation into alcohol, and marijuana begins to increase. Initiation into marijuana and alcohol peaks at 13 years, and then declines steadily. The initiation curves for alcohol and marijuana are almost identical, suggesting that their onset may be highly interrelated.

Figure 4-26
Age of Initiation
Alcohol-Cigarettes-Marijuana
1988



Summary

The nature and pattern of drug-taking behavior reported by the students in the sample tends to reflect high prevalence rates for experiences with chemical substances. More than half of the students have reported having tried marijuana, nearly one in every three reported

having tried stimulants or inhalants, and nearly one out of every five have tried cocaine. Experiences with other drugs are also high, including alcohol and tobacco products. What is evident is that when there was a chance to try a drug (albeit illicitly), over half of the students tried a drug. Although the majority of experiences with chemical substances seem to be experimental, about ten percent of the sample appear to be frequent or heavy drug users. Additionally, a large number of students have consumed alcohol, of which about 70 percent may be considered to actively consume alcohol in varying amounts and with varying frequency. A large percent of students have smoked cigarettes or tried smokeless or chewing tobacco, with approximately a quarter of the sample actively smoking.

There is also a definite relationship between age and grade and drug-taking behavior. As age and grade increase there is a corresponding increase in the prevalence of drug-taking behavior, but this relationship is more complex than it seems, in that it varies greatly with respect to ages at which different drugs are first experienced. Nevertheless, ages 12 and 13 are the ones at which drugs are most likely to be tried for the first time.

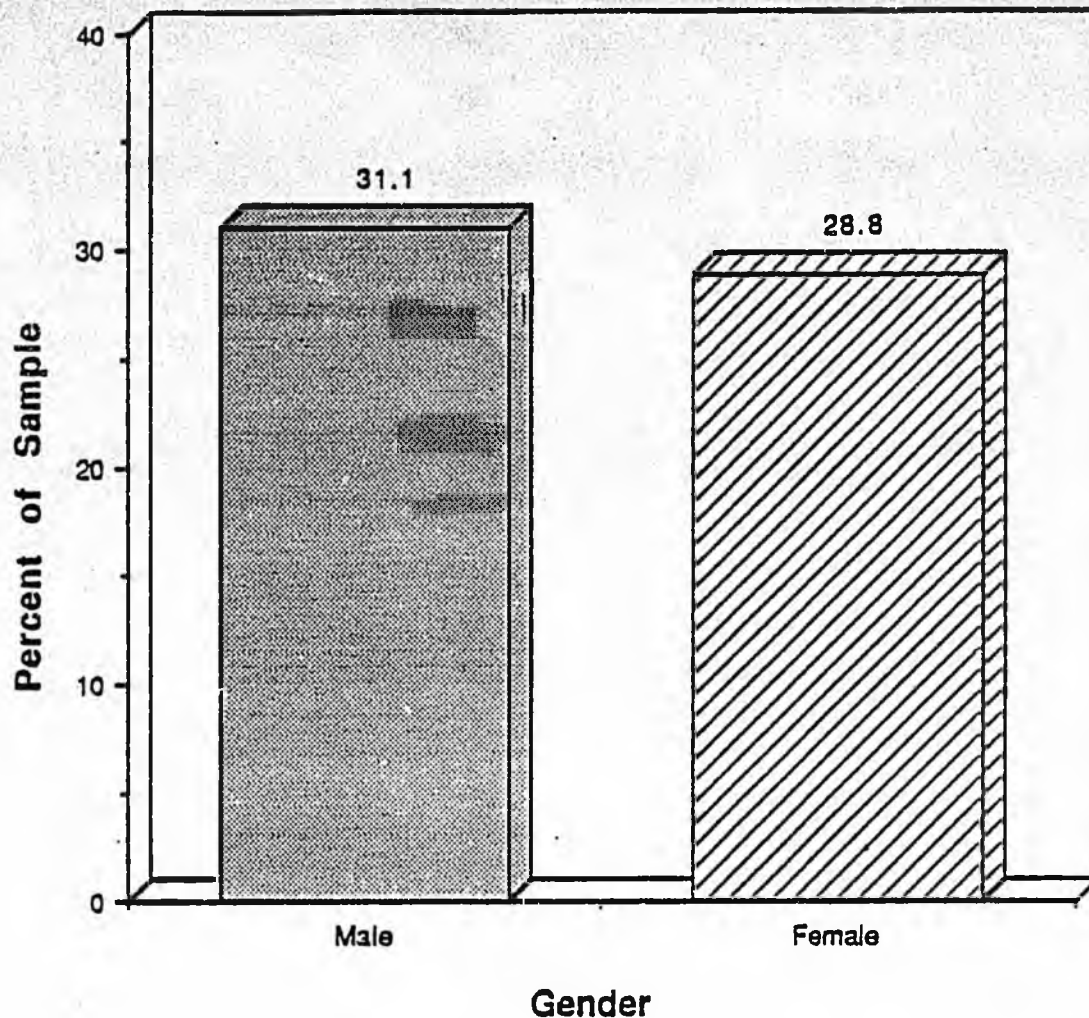
B. Demographic Characteristics and Drug Use

This section describes some of the relationships between prevalence and specific characteristics of the sample.

(1) Gender and Drug Use: Percent of Sample

Figure 4-27 indicates the percent of males and females within the total sample who reported ever having tried a drug. The proportions are about equally distributed, but slightly more males (31.1%) than females (28.8%) tended to have tried one or more drugs.

Figure 4-27
Gender and Lifetime Experience with a Drug
Total Sample
1988
(n=4129)



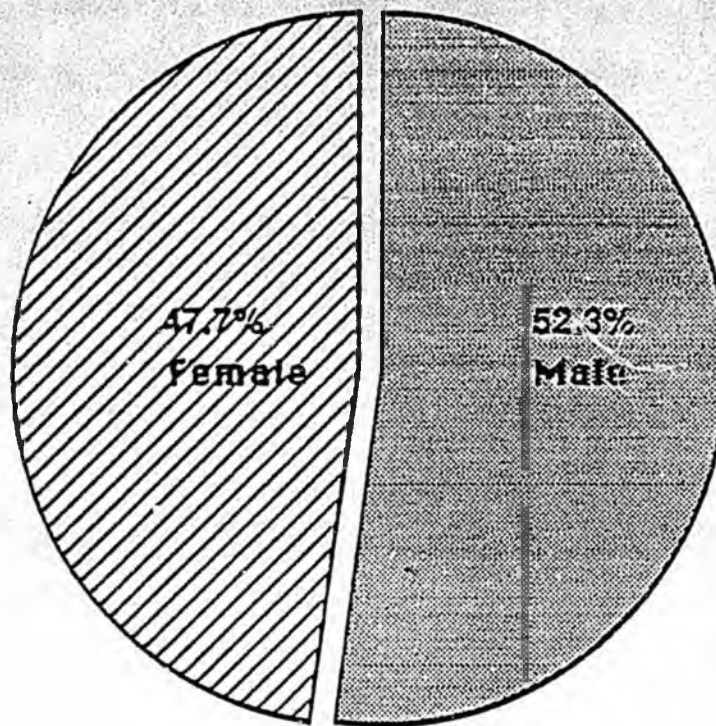
(2) Gender and Drug use: Percent of Students Trying

Figure 4-28 shows the proportion of males and females who tried a drug based on the total number of students trying a drug. Males (52.3%) tend to exceed females (47.%) to a modest extent.

(3) Grade and Drug Use by Substance

The data in Figure 4-29 are based on the number of students among the total sample, at different grade levels, who ever tried a substance. Heroin and tranquilizers were not included because of their lower prevalence levels. The overall configuration generally follows the patterns of use reported previously when describing grade and drug use, but varies for different drugs. One clear pattern involves cigarettes (TB).

Figure 4-28
Gender and Drug Use
Lifetime Experience With a Drug Among Those Having tried
(n=2097)

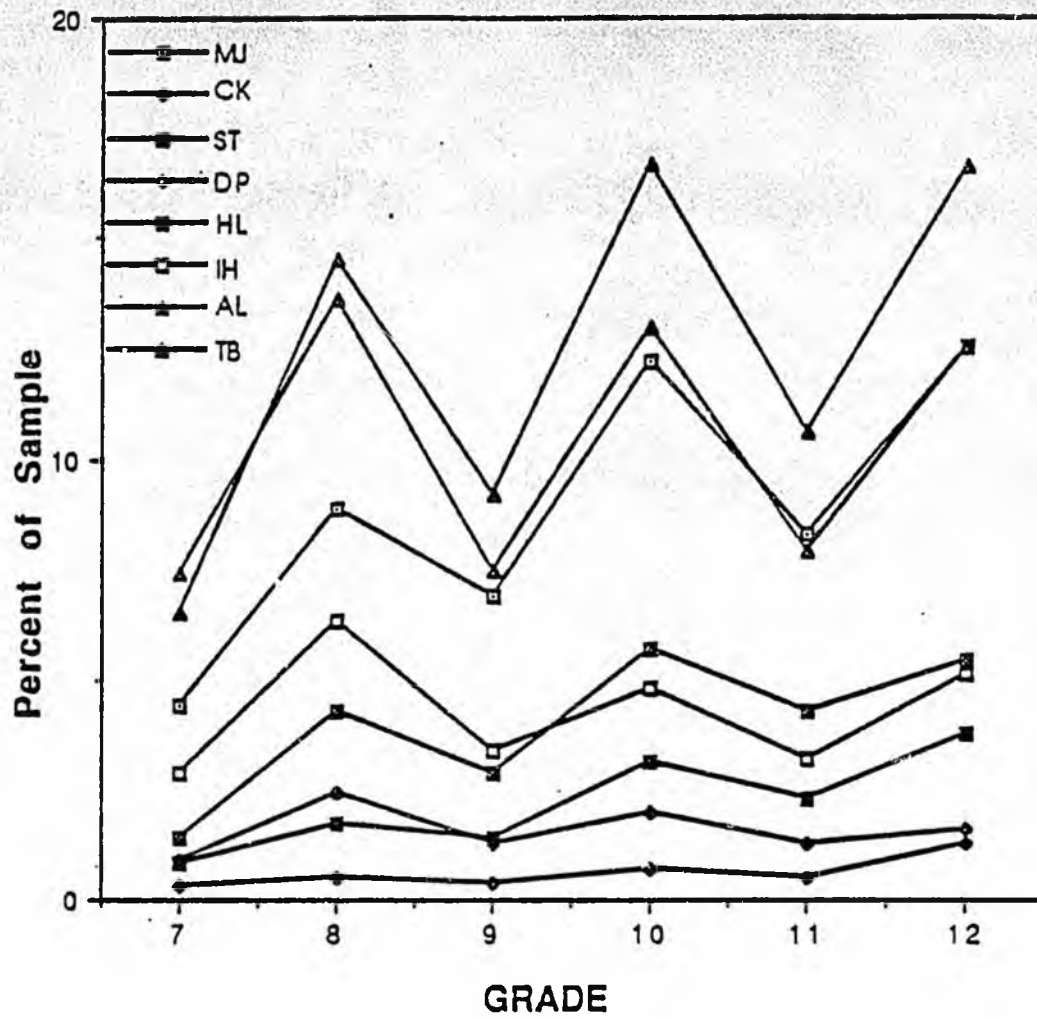


alcohol (AL), and Marijuana (MJ), the substances showing the highest prevalence levels. Use, which is relatively high in the seventh grade compared to inhalants (IH), stimulants (ST), depressants (DP), and cocaine (CK), increases at grade eight, then rises and falls thereafter. This same pattern is observed for the other substances, but at much lower prevalence levels, and with less dramatic increases and decreases. The overall configuration not only continues to suggest that grades 8, 10, and 12 may be important periods related to drug-taking behavior, but also that use of some drugs remain fairly consistent while use of others may either be low or minimal after initiation.

(4) Grade, Gender, and Lifetime Experience with a Drug

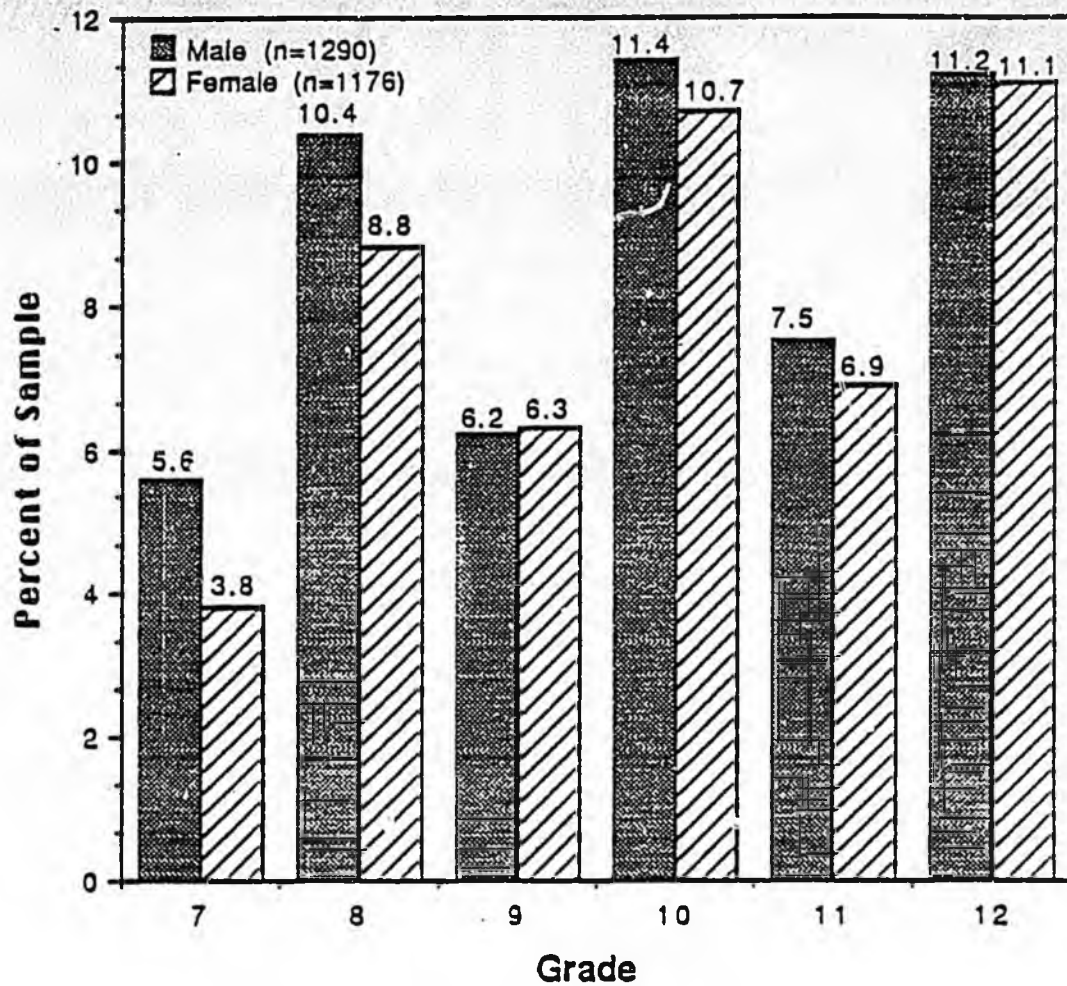
The pattern of use observed in Figure 4-30, which illustrates the relationship between gender, grade, and experience with a drug, is consistent with the data observed in Figure 4-29. (The data in figure 4-30 are based on the number of students within each grade who reported ever having tried a drug from among all students.) Except for grades 9 and 11, where use is about equal, males generally tried drugs to a greater extent than

Figure 4-29
 Lifetime Experience : Substance by Grade Level
 Total Sample
 (n=4129)
 1988



 females. This finding suggests that drug-taking behavior is not only age-grade related, but that gender may also be an important factor in understanding drug use among adolescents.

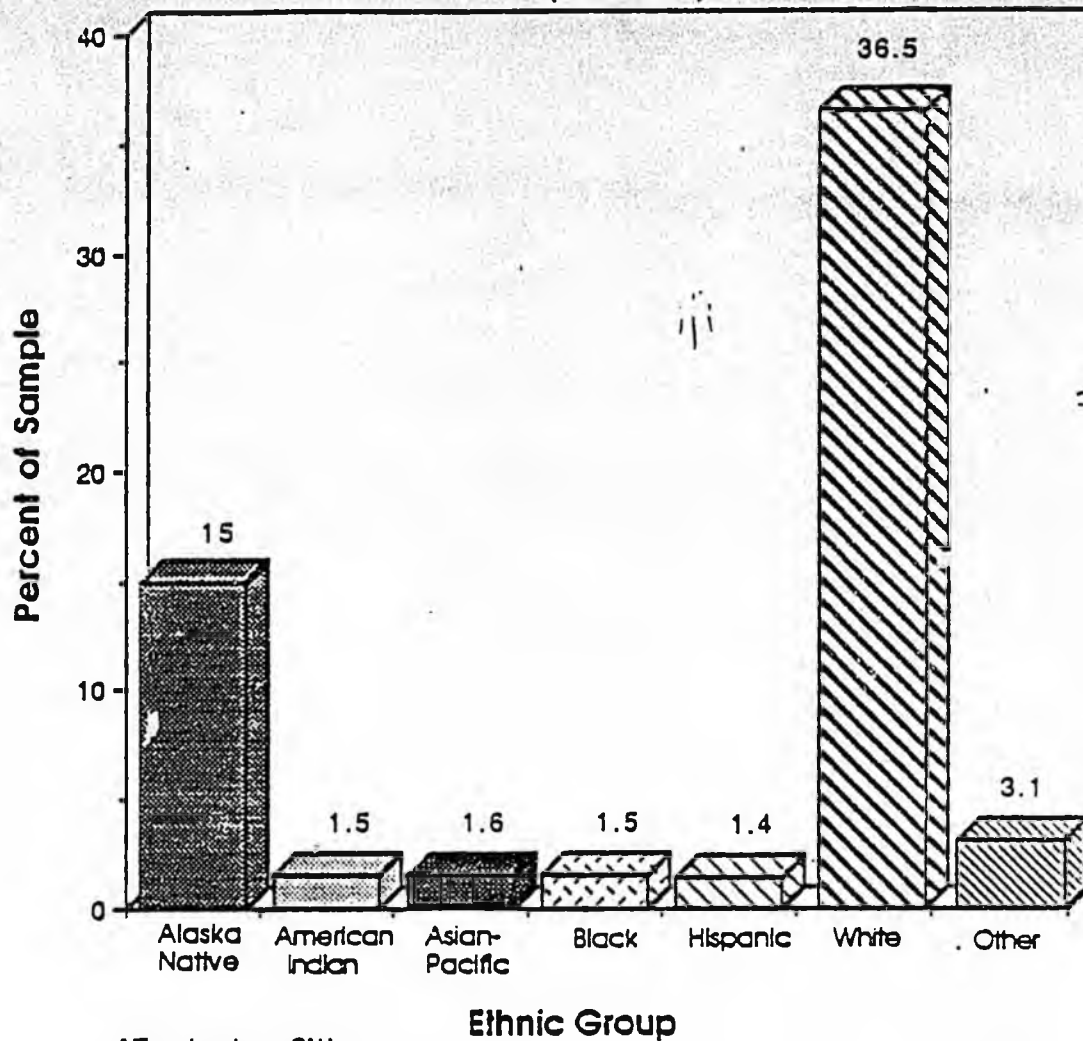
Figure 4-30
 Lifetime Experience With a Drug by Grade and Gender
 Total Sample
 1987-1988
 (n=4129)



(5) Ethnicity and Lifetime Experience with a Drug: Total Sample

The data in Figure 4-31 describes lifetime experience with a drug by ethnicity, derived from nine school districts. (Sitka, which did not ask ethnicity, is omitted from any analysis of ethnicity data.) As is readily observable, the largest proportion of students who tried a drug are White (36.5%), followed by Alaska Natives (15.0%). Drug use among the other groups is less than 2%, except for the 'Other' category.

Figure 4-31
Ethnicity and Lifetime Experience With a Drug
Total Sample
1988
(n=3565*)

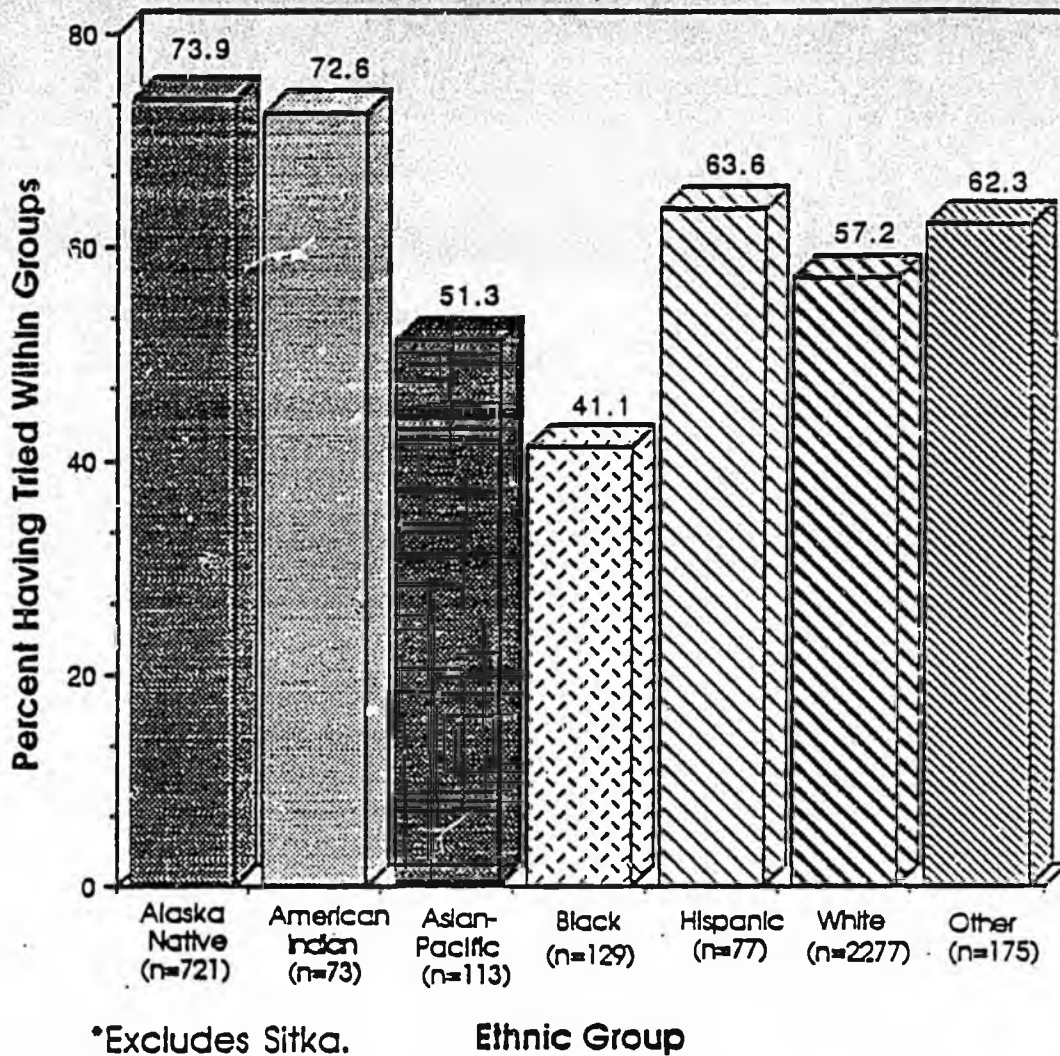


*Excludes Sitka

 (6) Lifetime Experience with a Drug within Ethnic Groups

Figure 4-32 describes the number of students within each of the different ethnic groups who reported ever having tried a drug. Among those who identified themselves as either an Alaska Native or American Indian, close to 75 percent within each group (73.9% and 72.6%, respectively), have indicated that they tried one or more substances. Over two-thirds of the Hispanic students (63.6%), and those in the "Other" (chiefly half Alaska Native and Half White) category (62.3%), have also tried a drug. Less than half the Black students (41.1%) have tried a drug, while close to two-thirds (57.2%) of the White students have indicated having tried a drug. Slightly over half of the Asian-Pacific students (51.3%) have indicated trying a drug.

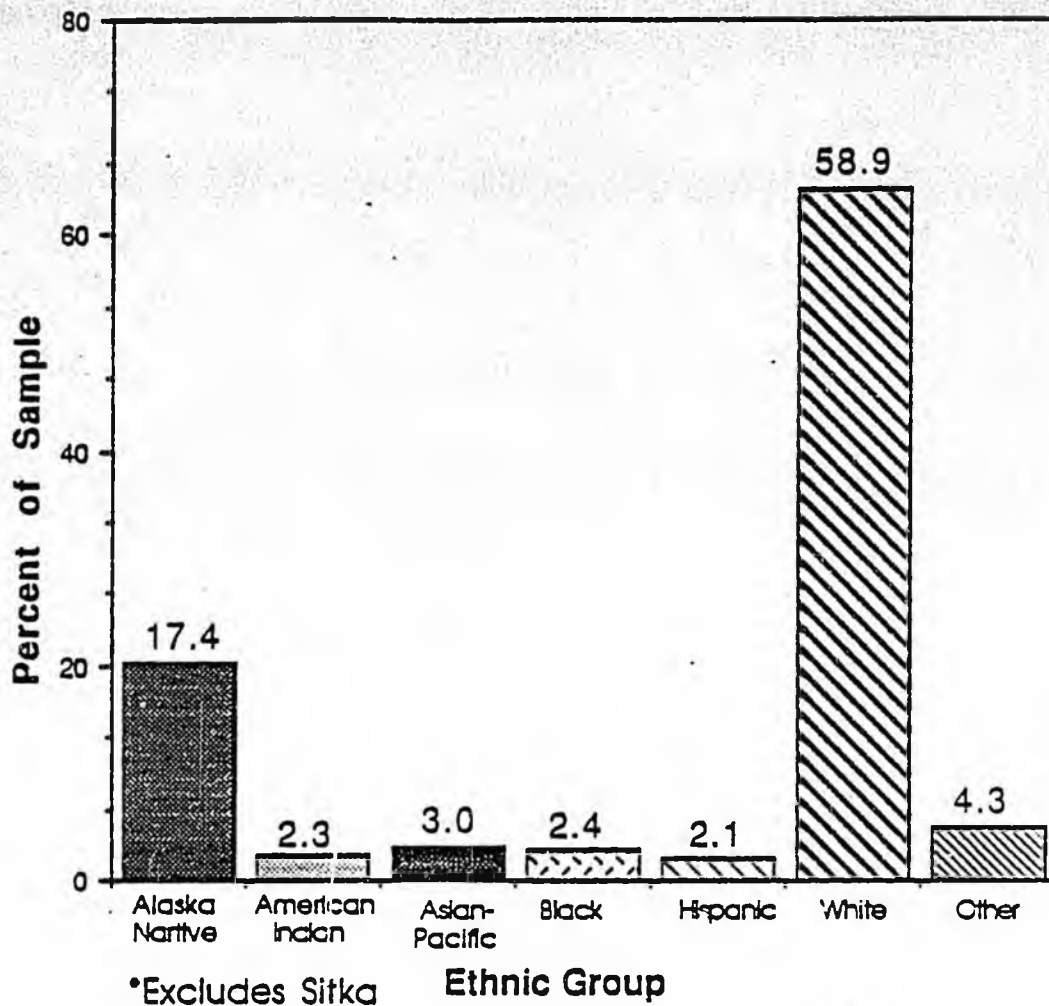
Figure 4-32
Drug Use Within Ethnic Groups*
1983 and 1988



(7) Ethnicity and Lifetime Experience with Alcohol

The pattern of lifetime experience with alcohol, reported in Figure 4-34 follows that shown in Figure 4-33 for experiences with other drugs. Whites show the highest prevalence (58.9%), while Alaska Natives are second (17.4%). Experience with alcohol among the other ethnic groups are relatively comparable.

Figure 4-33
Ethnicity and Lifetime Experience With Alcohol
Total Sample
1988
(n=2657*)



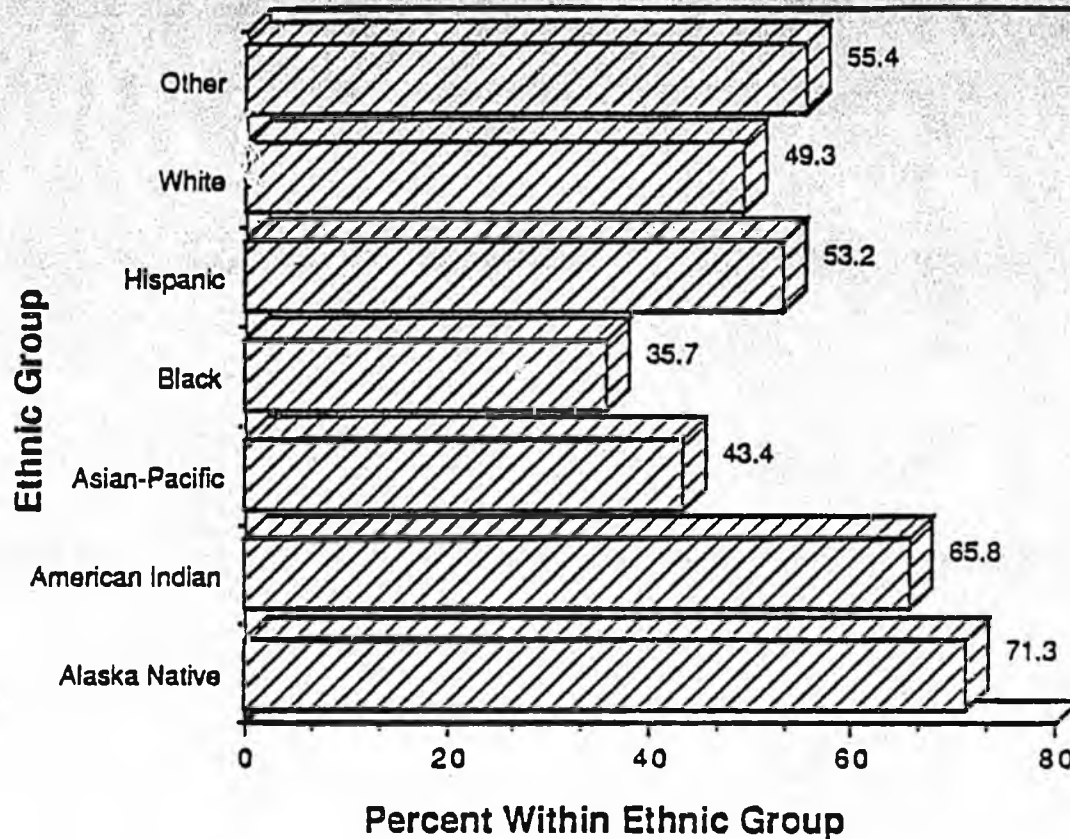
(8) Ethnicity and Lifetime Experiences With Chemical Substances

Two of the preceding reports (Figures 4-31 and 4-32) referred to use of one or more of chemical substances, excluding alcohol and tobacco. Figures 4-34 through 4-43 show lifetime experience with each of the different chemical substance, excluding heroin because of its low prevalence level, by ethnicity, i.e., an ever versus never comparison by students within each ethnic group.

(a) Marijuana

Figure 4-34 shows individual variations with respect to use or nonuse of marijuana within ethnic groups. Among those groups having ever tried marijuana, Alaska Natives reveal the highest prevalence (71.3%), followed by American Indian (65.8%), and Hispanic (53.2%) students. Students

Figure 4-34
Ethnicity and Marijuana: Lifetime Experience
1988



classified as 'Other' show the next highest prevalence level (44.6%). Just over half the White students (50.7%) tried marijuana, and less than half of the Asian-Pacific students tried marijuana (43.4%). Black Students showed the lowest prevalence (35.7%).

B. Cocaine

As is observable in Figure 4-35, the prevalence levels for experience with cocaine (including crack) are generally low across ethnic groups. Among those who have ever tried cocaine, Hispanics showed the highest level (6.5%), followed by White students (5.1%).

C. Stimulants

Among those ethnic groups trying stimulants (Figure 4-36), American Indian (39.7%) and Hispanic (37.7%) showed the highest levels, followed by White students (26.7%). Black students showed the lowest prevalence level (10.9%).

Figure 4-35
Ethnicity and Cocaine: Lifetime Experience
1988

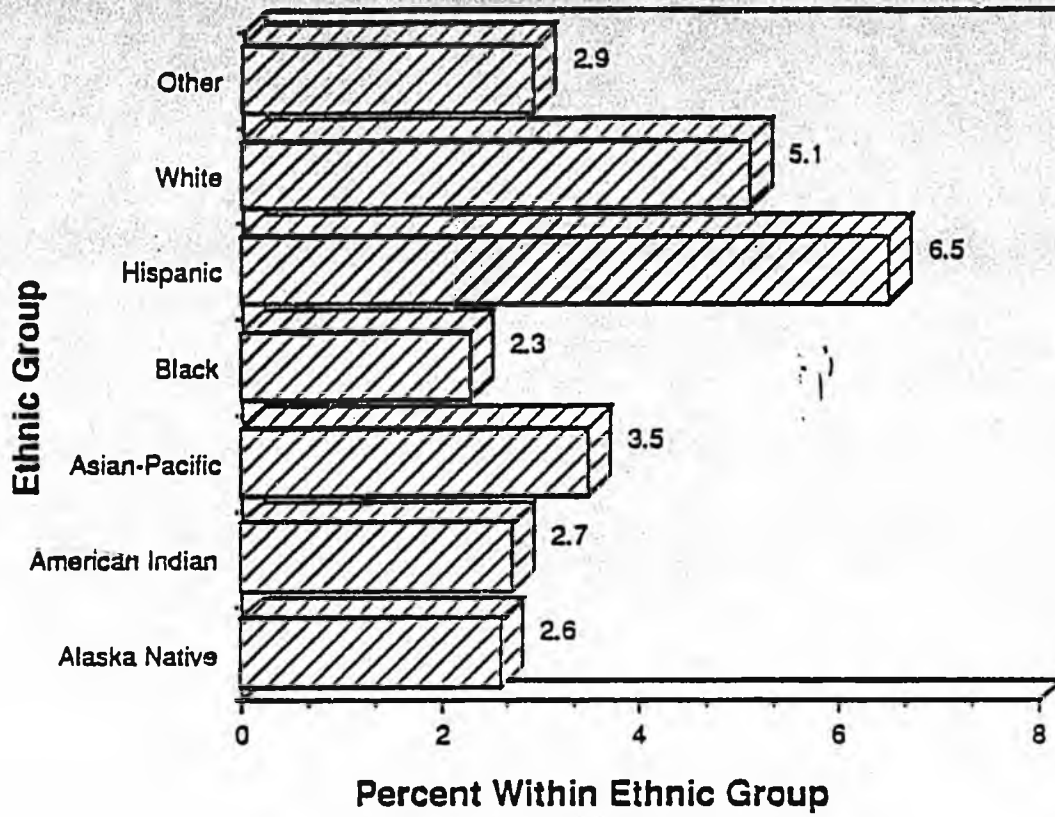
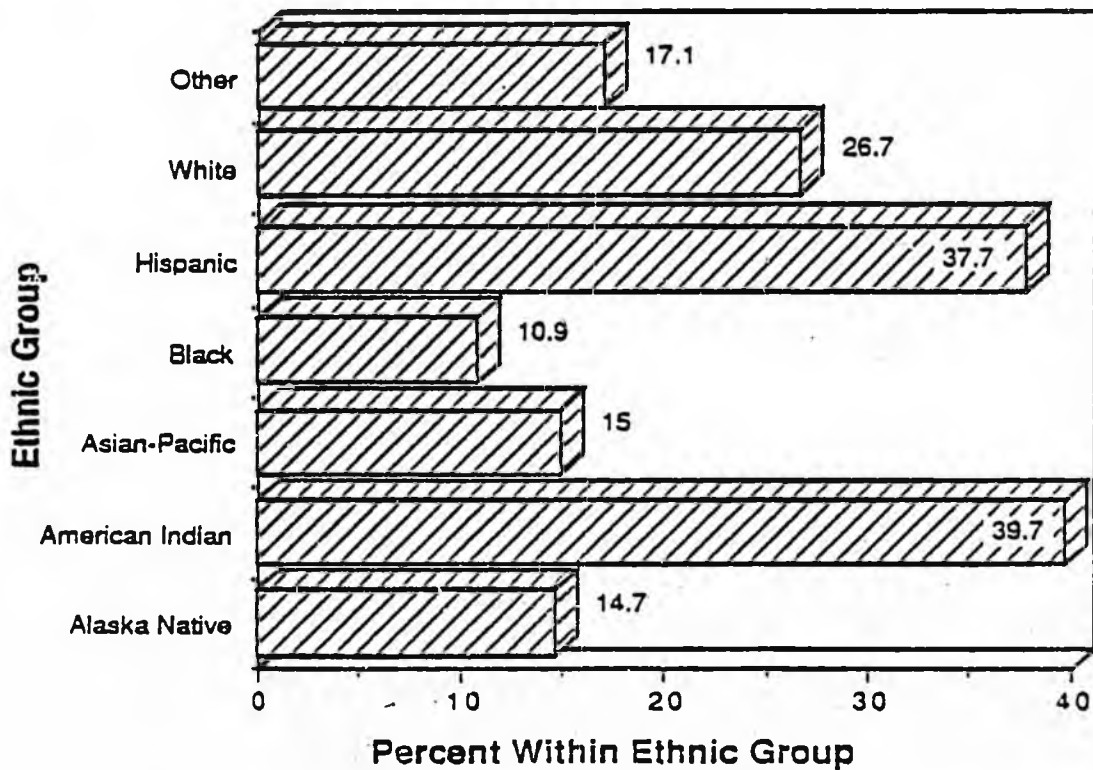


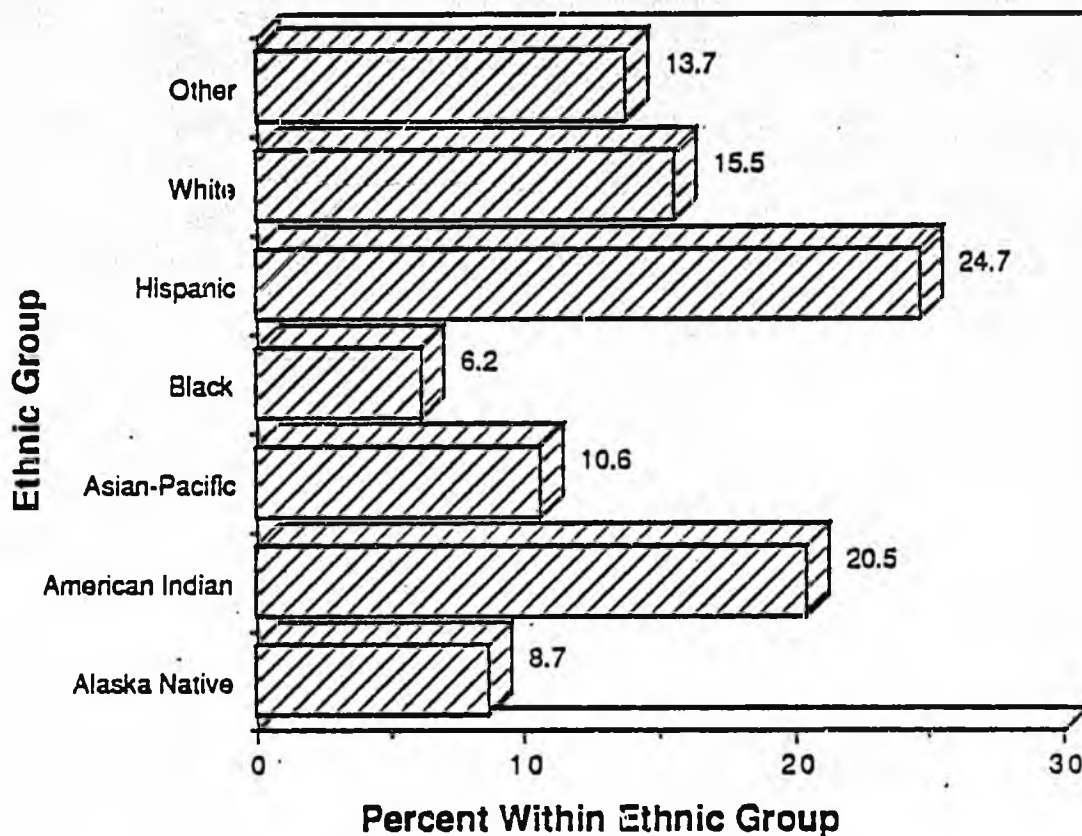
Figure 4-36
Ethnicity and Stimulants: Lifetime Experience
1988



D. Hallucinogens

The highest level of experience with hallucinogens is shown among Hispanic students (24.7%), followed by American Indian (20.5%) and Whites (15.5%). Blacks showed the lowest level (6.2%).

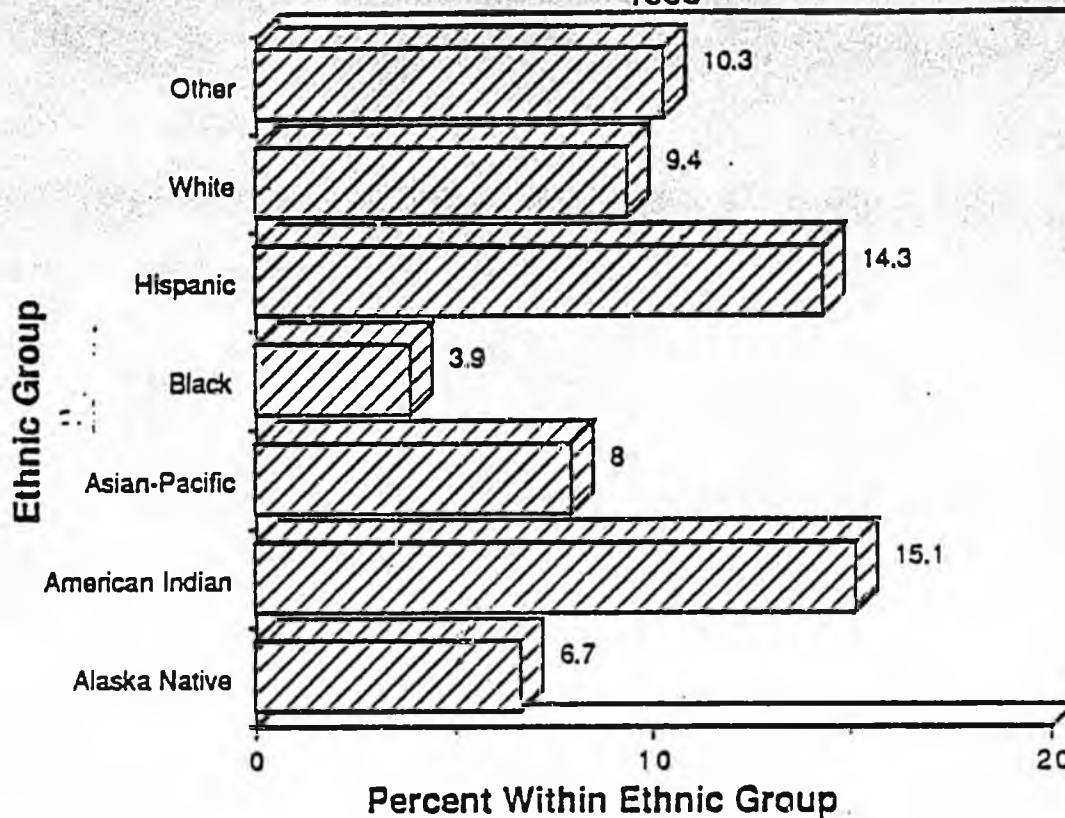
Figure 4-37
Ethnicity and Hallucinogens: Lifetime Experience
1988



E. Depressants

Figure 4-38 shows that among students within the different ethnic groups reporting having tried depressants, Hispanics (24.7%) and American Indians (20.5%) showed the highest prevalence levels. Whites were next (15.5%), followed by students in the 'Other' category (13.7%). Blacks showed the lowest level of use (6.2%), followed by Alaska Natives (8.7%).

Figure 4-38
Ethnicity and Depressants: Lifetime
Experience
1988



F. Tranquilizers

Overall, lifetime prevalence for tranquilizers was relatively low, as indicated in Figure 4-39. Among those groups having tried it, Hispanics showed the highest level (16.9%), followed by Whites (11.3%). Alaska Natives showed the lowest use (5.1%), with Blacks (7.0%) having the next highest level.

G. Inhalants

With the exception of marijuana (Figure 4-34), lifetime prevalence for use of the other substances (Figures 4-35 to 4-39) is relatively low. In contrast to these findings, lifetime experience with inhalants is proportionately higher across all ethnic groups, as shown in Figure 4-40. Inhalant use is most prevalent within the Hispanic (35.1%), American Indian (32.9%), and White (27.3) groups. Alaska Natives (26.5%) and the group classified as 'Other' (24.6%) follow. Use among Blacks (13.2%) and Asian-Pacific (16.8%) students is also relatively high when compared to their experiences with other substances.

Figure 4-39
Ethnicity and Tranquillizers: Lifetime Experience
1988

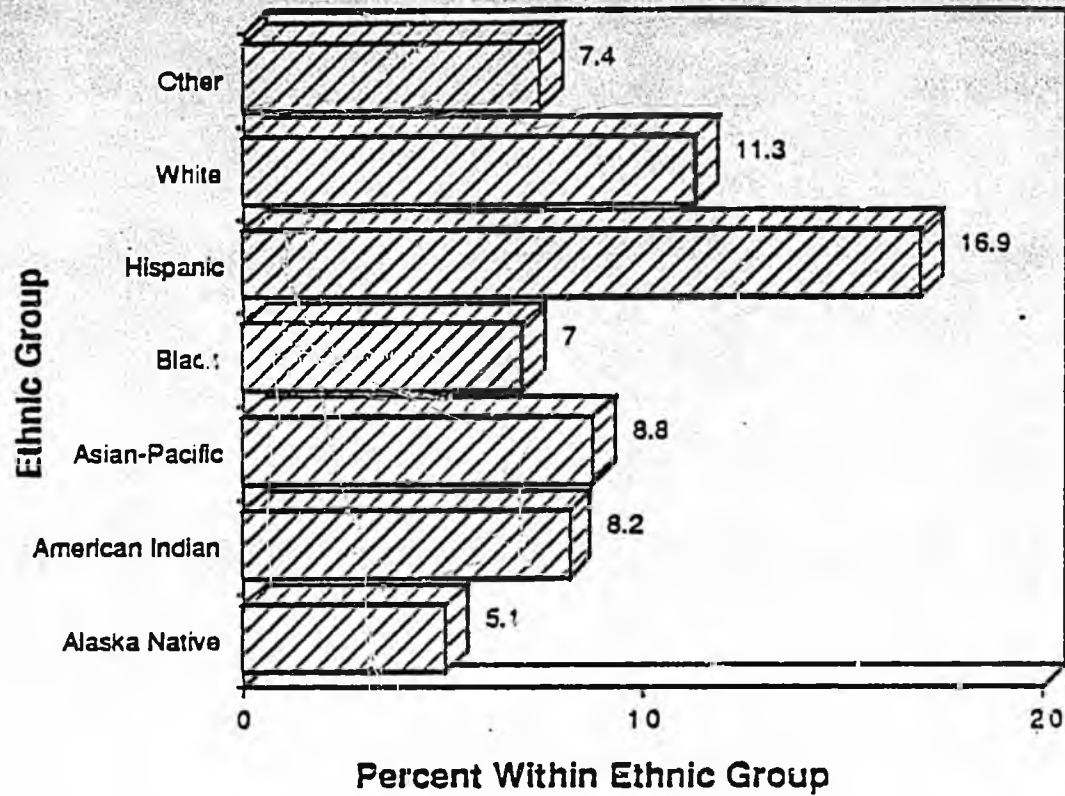
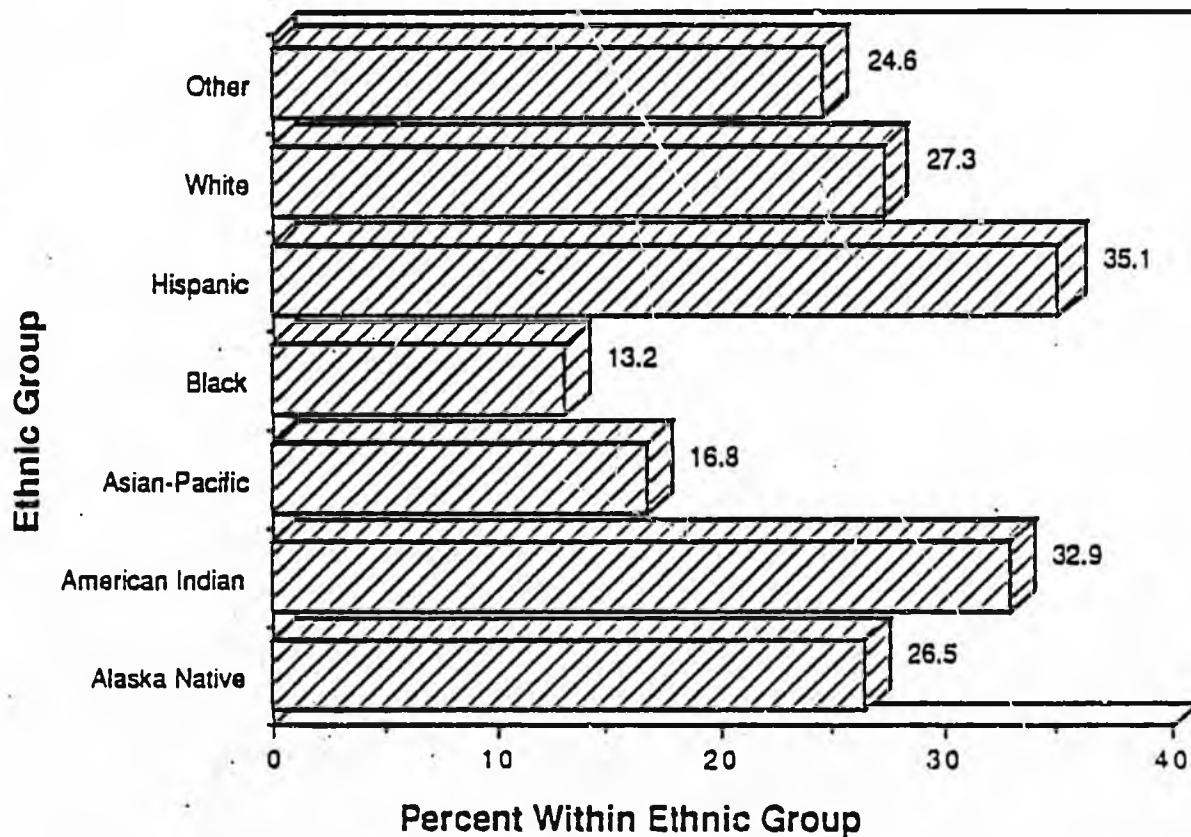


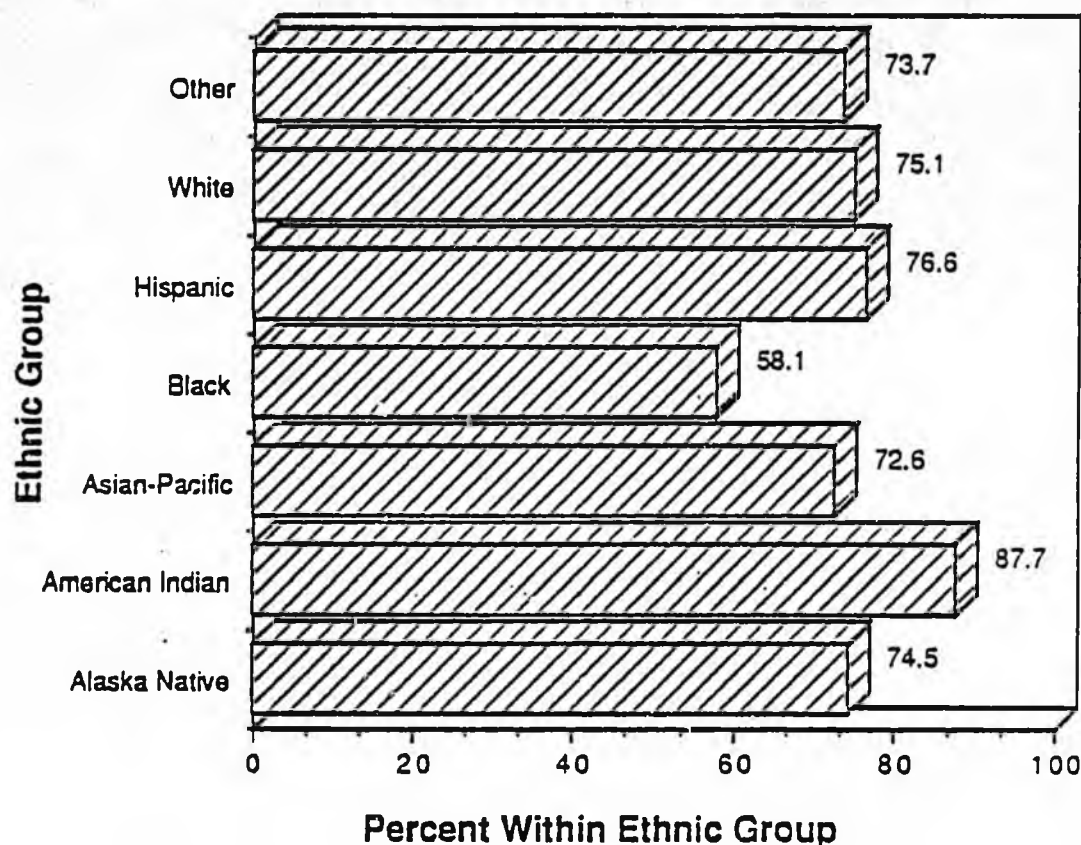
Figure 4-40
Ethnicity and Inhalants: Lifetime Experience
1988



H. Alcohol

Figure 4-41 describes lifetime experience with alcohol by ethnicity. The highest prevalence level is among American Indian youth (87.7%), followed closely by Hispanics (76.6%), Whites (75.1%) and Alaska natives (74.5%). Blacks showed the lowest level (58.1%).

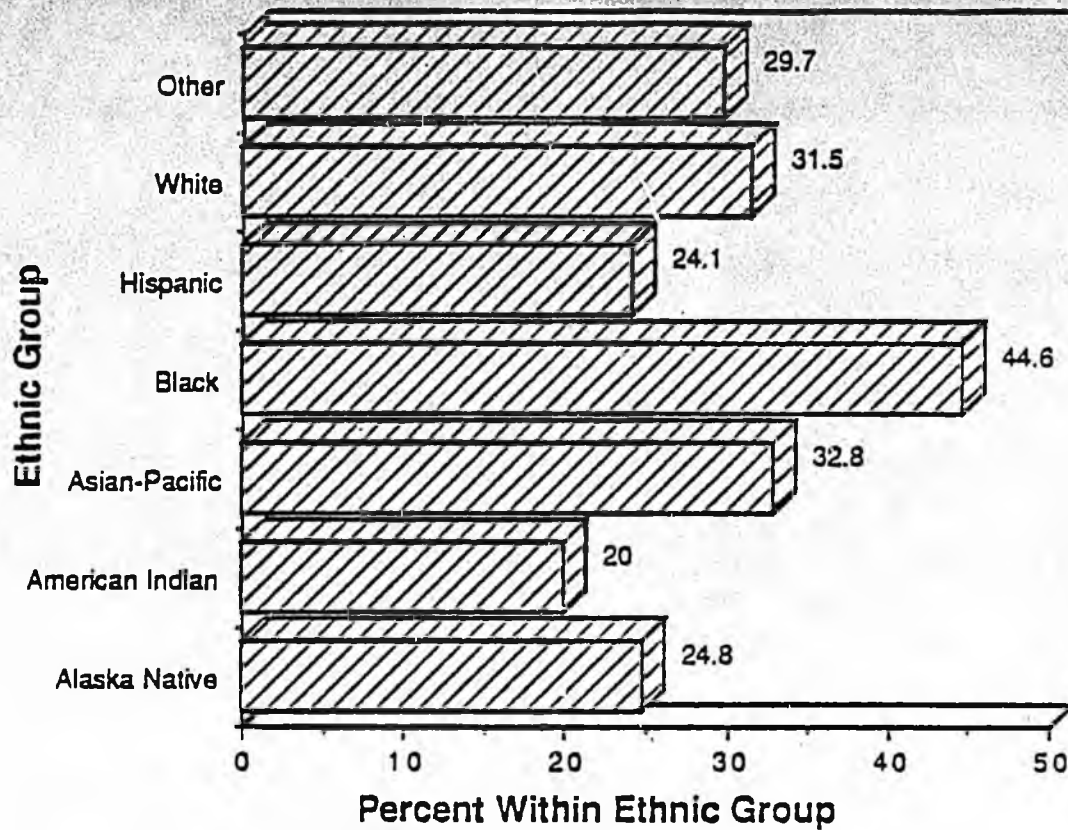
Figure 4-41
Ethnicity and Alcohol: Lifetime Experience
1988



I. Cigarettes

Figure 4-42 shows the findings regarding ethnicity and lifetime experience with cigarettes. In contrast to other results, Black students show the highest prevalence for having smoked (44.6%), followed by Asian-Pacific youth (32.8%). Whites are next (31/5%), followed by students classified as 'Other' (29.7%), and by Alaska Natives (24.8%). American Indian youth report the lowest rate (20.0%), and Hispanics follow closely (24.1%). Overall, however, a large number of students within each of the ethnic groups have smoked cigarettes one or more times.

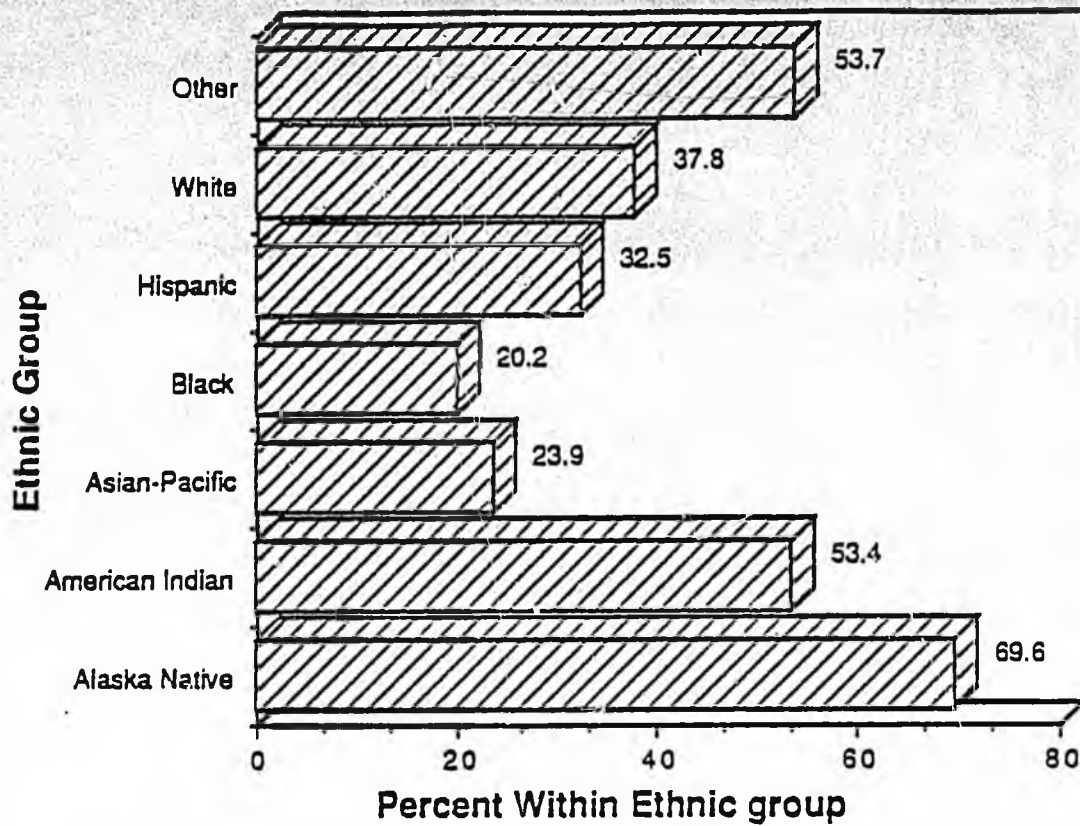
Figure 4-42
 Ethnicity and Cigarette Smoking:
 1988



J. Chewing/Smokeless Tobacco

Chewing or smokeless tobacco has been used by a large number of students within each of the ethnic groups. This finding is consistent with reports of an increase in smokeless tobacco among adolescents during the past five years (Jones & Moberg, 1988; McCarthy et al., 1986). A particularly high prevalence level has been noted among American Native youth (Tanner, 1987), a finding which is supported by this study. Alaska Native youth showed the highest prevalence level (69.6%) for having tried either chewing or smokeless tobacco. Students in the 'Other' ethnic category (53.7%) and American Indian youth (53.4%) both showed the second highest levels for having tried/used smoking or chewing tobacco. White youth followed, with 32.5 percent having indicated they tried chewing or smokeless tobacco, Hispanic youth were next (32.5%), followed by Asian-Pacific (23.9%) youth. Black students, in contrast to their smoking behavior, showed the lowest prevalence level (20.2%) for having tried smokeless or chewing tobacco.

Figure 4-43
Ethnicity and Lifetime Experience with
Chewing or Smokeless Tobacco



In summary of the findings concerning drug-taking behavior within ethnic groups (Figures 4-34 to 4-43), Hispanic and American Indian youth, who constituted 2.0% (n=76) and 1.7% (n=66) of the sample, respectively, showed a disproportionately high level of prevalence for lifetime experience for all substances except marijuana and tobacco products. Other ethnic groups show variations in terms of prevalence of drug-taking behavior. Some of these variations may be accounted for by cultural differences within each of the ethnic groups, and by peer influence or encouragement from a group of close friends who mutually support drug use and who use drugs together (Oetting, Edwards, & Beauvais, in press). This notion will be discussed further in Chapter 6.

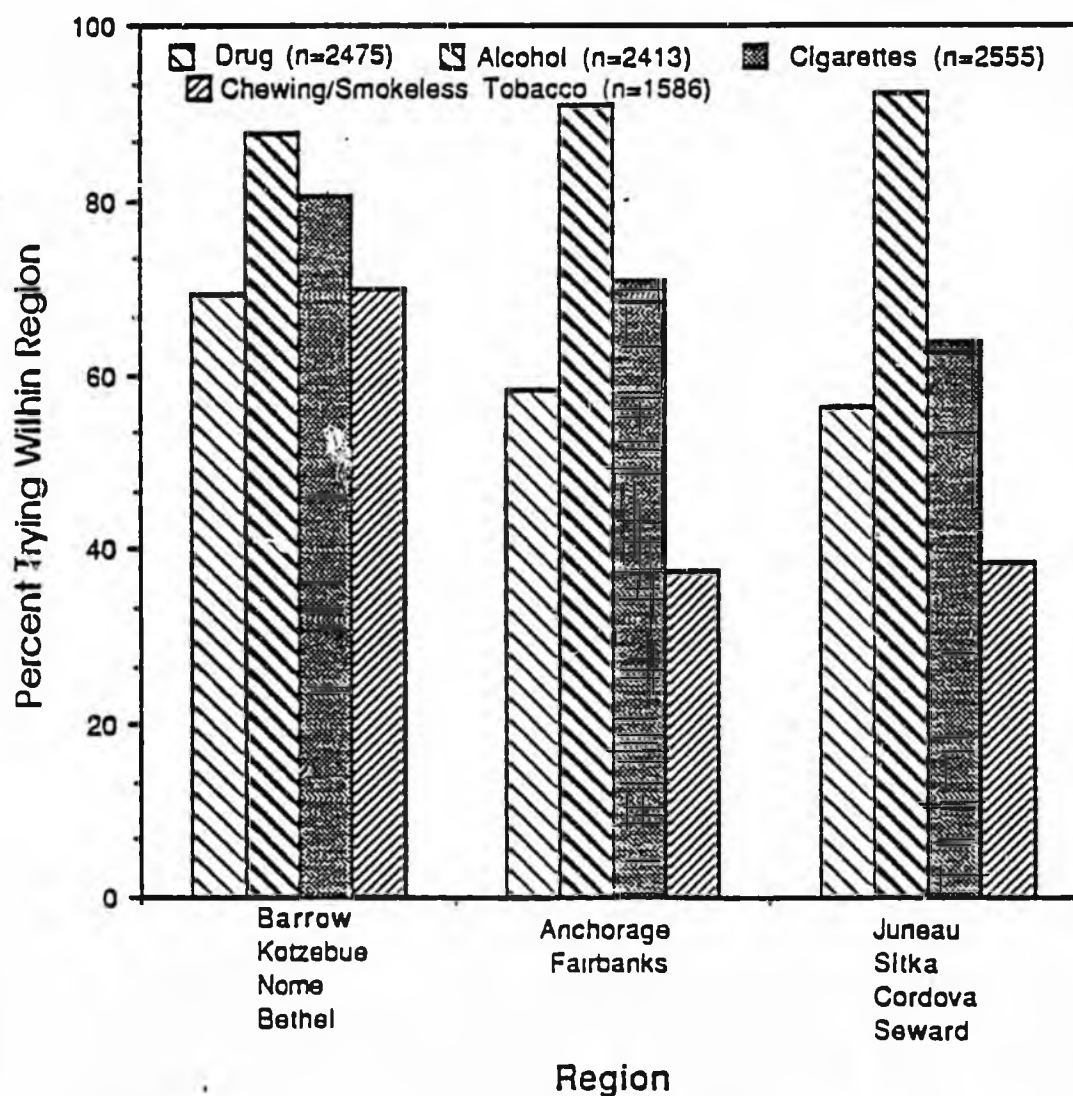
(9) Regional Comparisons

For comparison purposes, and in order to provide for the anonymity of each school district, the data has been aggregated to form three comparison groups. Anchorage and Fairbanks, primarily large urban centers, have been combined to represent one group. Barrow, Kotze-

bue, Nome, and Bethel constitute a second group, representing northern and western regions; Juneau, Sitka, Seward, and Cordova have been combined to form the third comparison group.

Figure 4-44 shows a composite of drug, alcohol, cigarette, and chewing/ smokeless tobacco use within the three regions during the past year. The data in the figure represents the number of students within each region who reported ever having tried each of the substances. The most notable difference is for use of chewing/smokeless tobacco, with the Barrow-Kotzebue-Nome-Bethel region showing the highest prevalence. Cigarette smoking is also higher within this region, as is lifetime experience with one or more drugs. Alcohol use is generally consistent across regions.

Figure 4-44
Comparison of Drug Use, Alcohol Use, Smoking,
and Use of Chewing/Smokeless Tobacco within
Regions
1988



In summary, the result reported in section B reinforces the belief that drug-taking behavior represents a complex interaction involving age, grade and gender (cf., Segal, 1988). Additionally, ethnicity needs to be taken into consideration when a diverse population is present. Moreover, especially in Alaska where regional differences prevail, geographical location is another factor that needs to be taken into consideration. When applying these considerations to the Alaskan data, it appears that different patterns of drug-taking behavior is occurring in different regions and within different ethnic groups. Within this context, youngsters at different age-grade levels show a diverse pattern of drug use which also appears to be a function of gender.

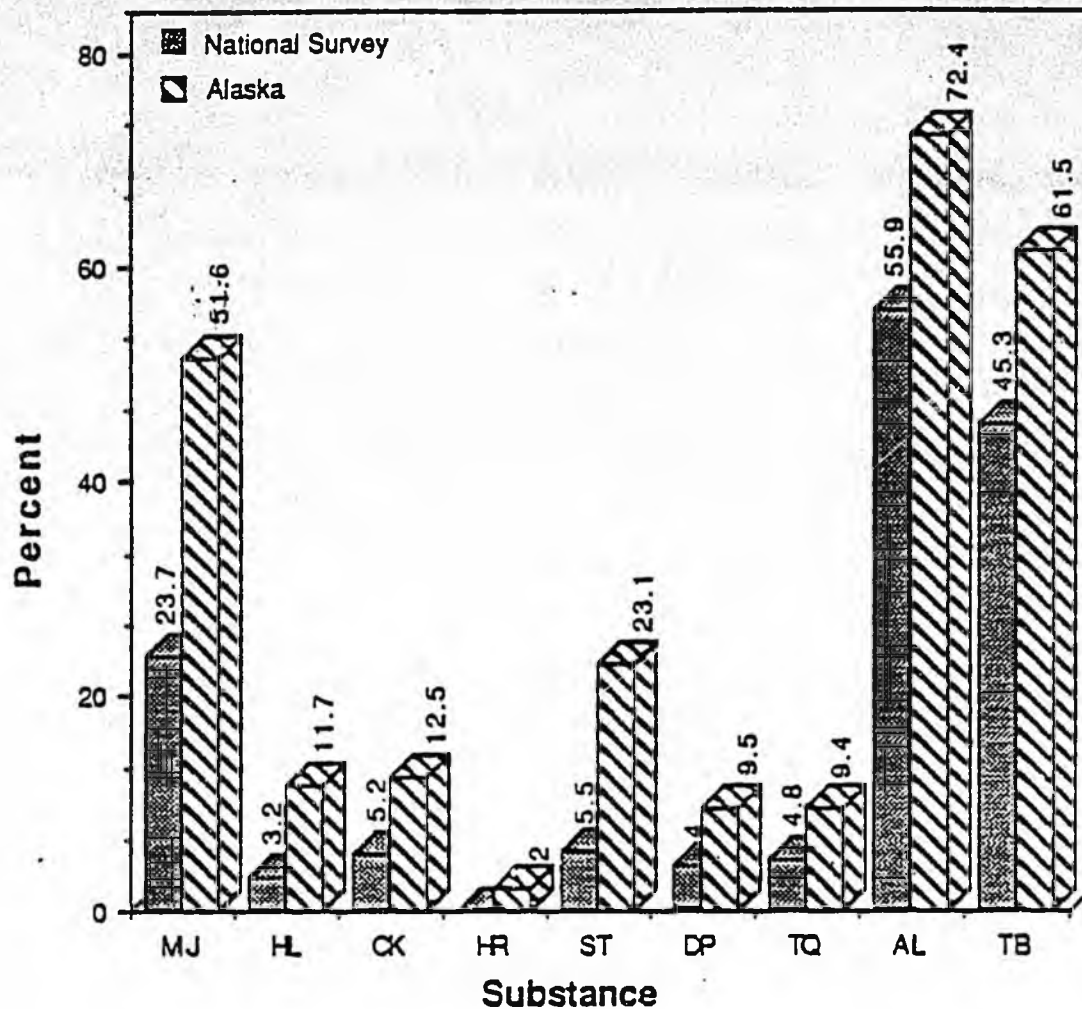
C. Comparisons with Other Surveys

(1) Comparison of Alaska 12-17 Year-Olds with the 1985 National Survey on Drug Abuse: Lifetime Prevalence

The 1985 National Survey on Drug Abuse (NIDA, 1986) identifies lifetime prevalence of drug use among 12-17 year-olds in the lower-48 states. A comparison of the Alaskan data for the same age group (Figure 4-45) shows that Alaskan 12-17 year-olds exceeded the national levels for every substance. Marijuana, for example, was greater than twice the national level, and stimulants were more than three times the national rate.

The question arises of why the Alaskan data is so much higher than the prevalence levels cited in the national survey. One possible answer involves differences in methodology. The Alaska survey utilized a procedure which called for anonymous responses to questionnaires. The national study involved direct interviews. It is possible that direct interviews, particularly when conducted in the interviewee's home, elicited more false negatives than responding anonymously to questionnaires in school, thereby resulting in lower prevalence rates. An alternative explanation is that substance use in Alaska is higher than in the lower-48 states.

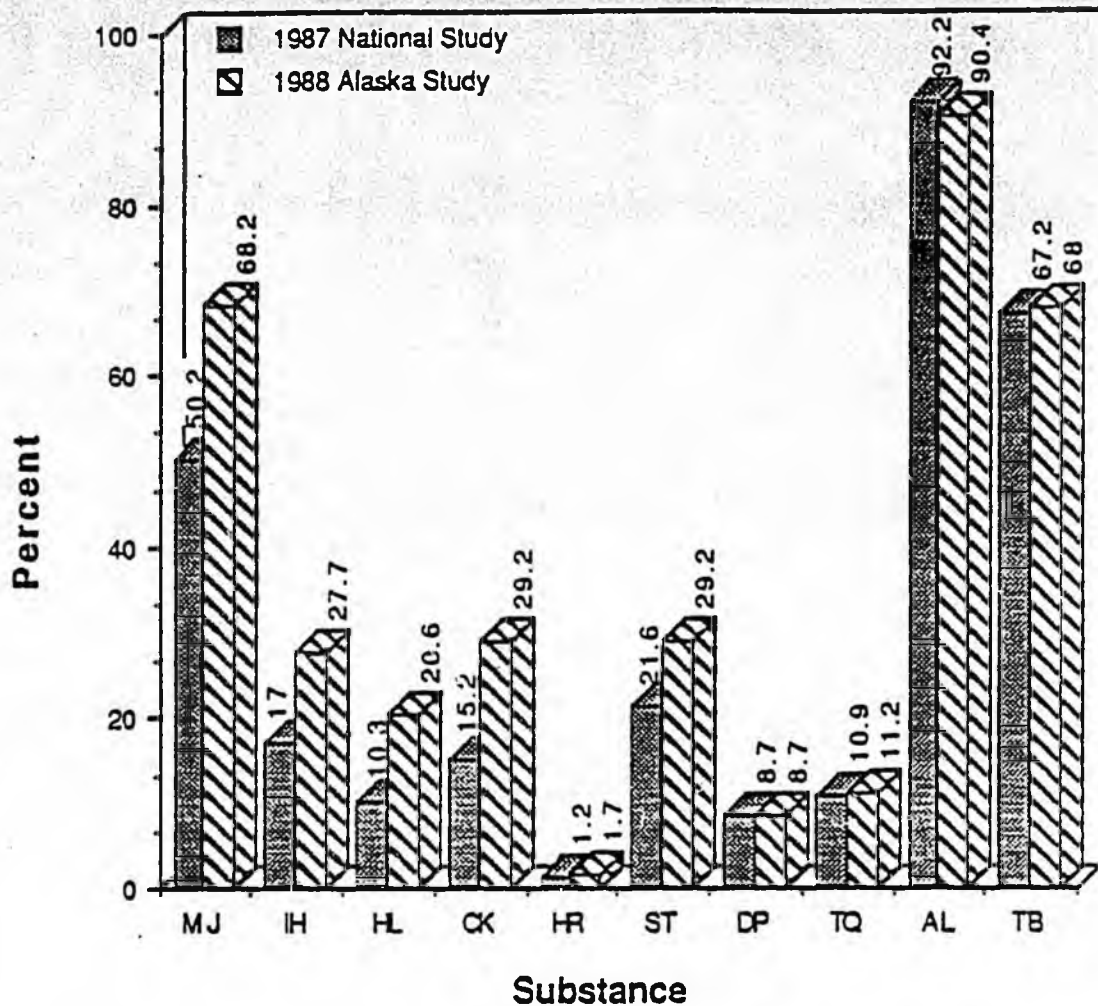
Figure 4-45
Comparison of Alaska With
the 1985 National Household Survey
for 12-17 Year Olds
Lifetime Experience



 (2) Comparison of Alaska Seniors with the 1987 National High School Senior Survey: Lifetime Prevalence.

Table 4-46 provides a comparison of the findings for Alaska high school seniors with the findings from the 1987 National High School Senior Survey (Johnston, 1988). As may be observed, the Alaskan data is either generally comparable for some substances, or exceeds national prevalence levels. Alaskan prevalence rates for marijuana, inhalants, hallucinogens, cocaine, and stimulants tended to be higher than the national figures; experiences with heroin, depressants, tranquilizers, alcohol, and tobacco were fairly comparable.

Figure 4-46
Comparison of Alaskan Seniors with
the 1987 National High School Senior Study
Lifetime Prevalence

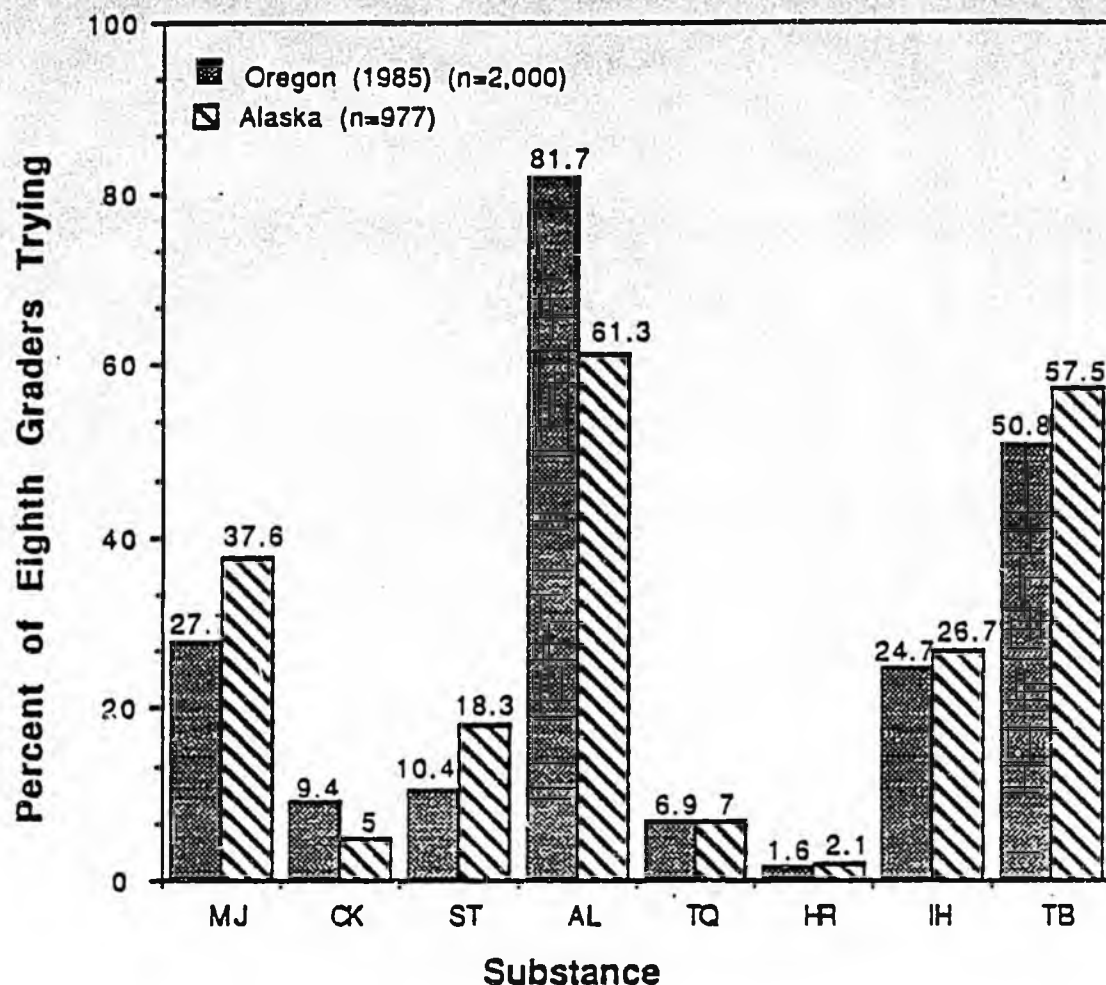


(3) Comparison With the 1985 Oregon School Study: Grades 8 and 11

(a) Eighth grade

Figure 4-47 provides a comparison of prevalence levels of drug use found among eighth graders in Oregon (Egan, 1985), with eighth graders in Alaska. Because the Oregon survey differed with respect to the kinds of substances it inquired about, only those substances which were similar were compared. The findings show that Alaska's eighth graders exceeded Oregon's prevalence level for lifetime experience for all substances except alcohol and tobacco. The higher Alaskan levels ranged from a high of 9.9 percent for marijuana to a low of 0.5 percent for heroin.

Figure 4-47
 Eighth Grade Comparisons:
 Alaska and Oregon
 Lifetime Prevalence

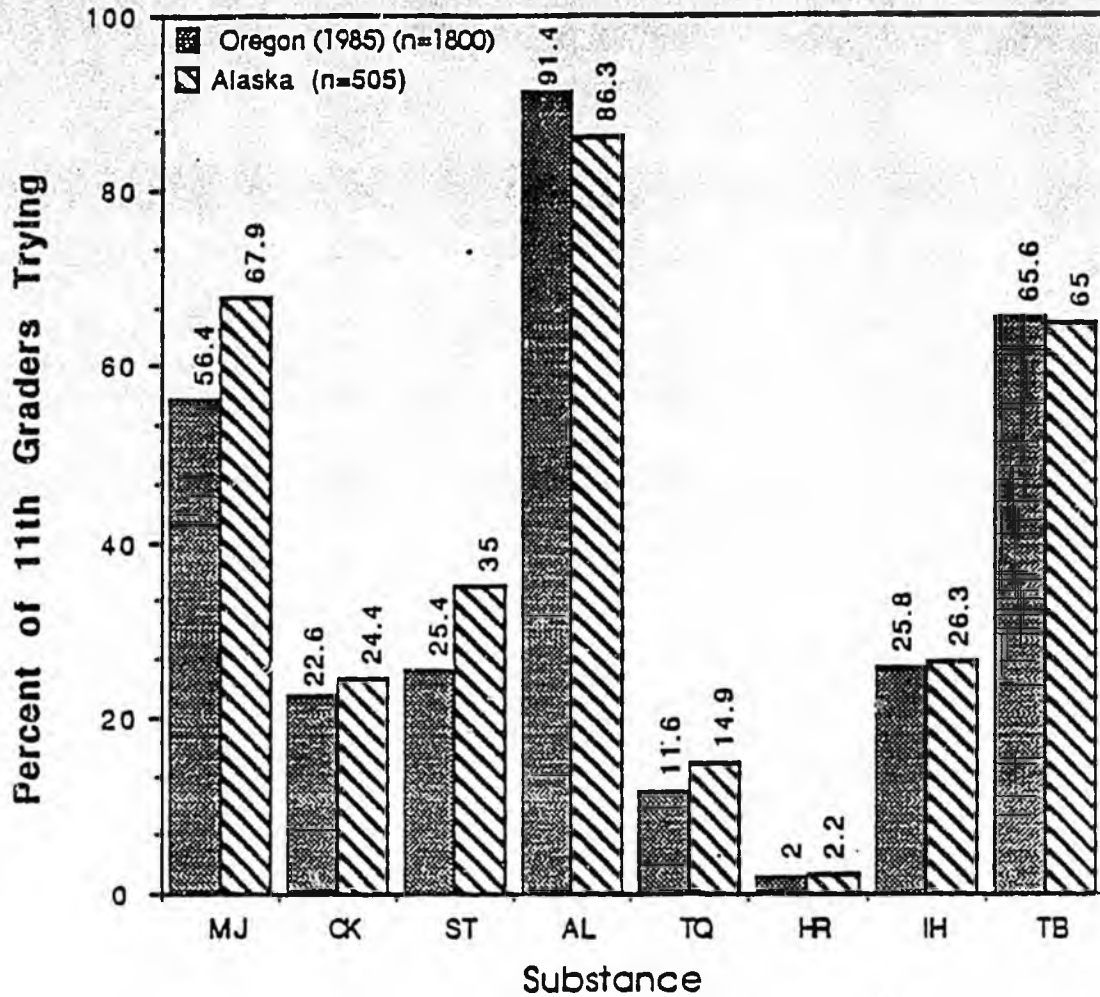


 (b) Eleventh Graders

Figure 4-48 compares 11th graders. As with the 8th graders, Alaska's 11th graders, except for alcohol, and ever so slightly for tobacco (0.6%), also exceeded their Oregonian counterparts, with the differences ranging from from a low of 0.2 percent for heroin to a high of 3.3 percent for tranquilizers.

In summarizing the different comparisons, it appears that the level and pattern of drug-taking behavior in Alaska differs from what has been reported in two national surveys (Johnston, et al., 1988; NIDA, 1986). Alaskan youth, with no exceptions, showed prominently high prevalence levels for lifetime experience with all drugs than comparably aged youth (12-17 years) in the lower-48 states. Additionally, Alaskan high school seniors showed prevalence levels which either exceed or matched prevalence

Figure 4-48
Eleventh Grade Comparisons:
Alaska and Oregon
Lifetime Prevalence

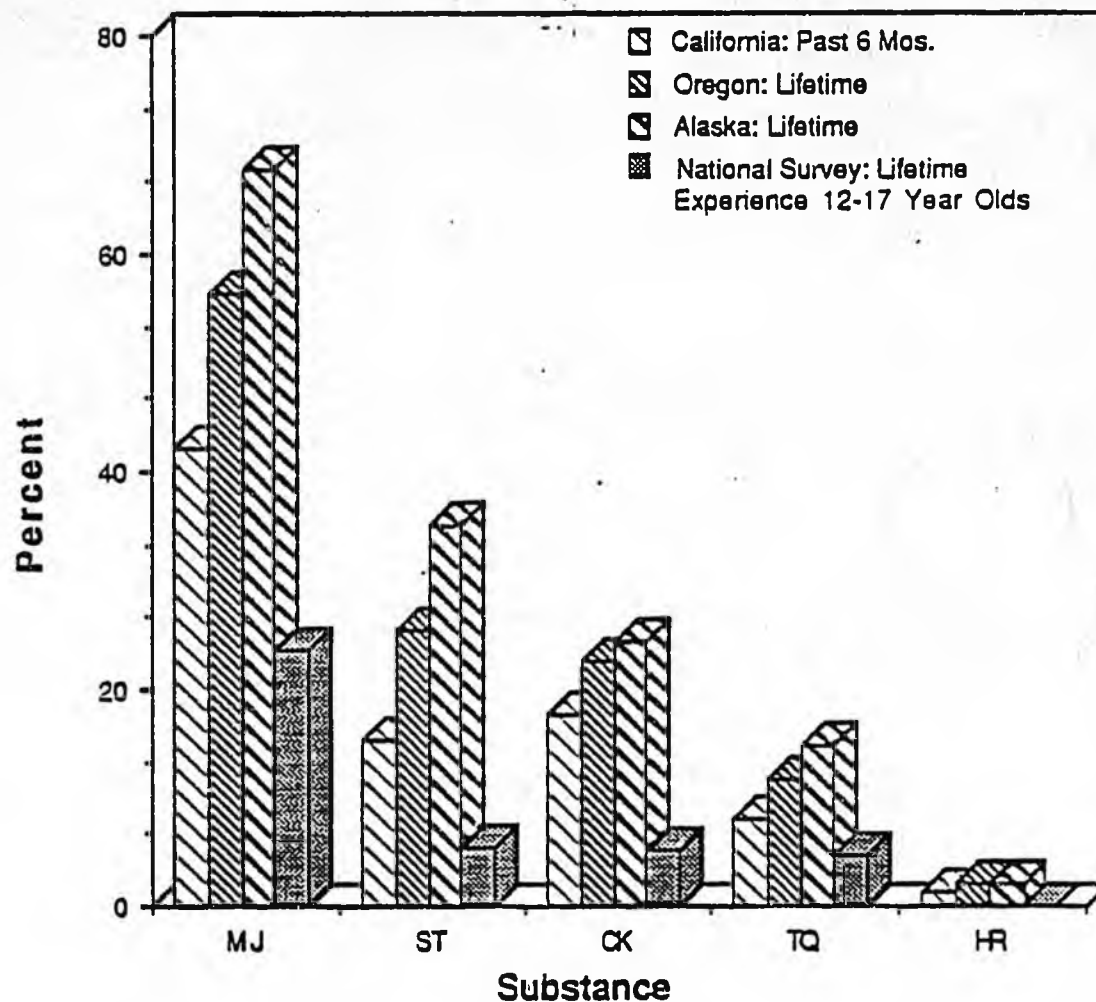


 levels reported from the national study of high school seniors. Similar findings were found when comparing Alaska's 8th and 11th graders with results from a recent Oregon school survey.

The major question that arises, in light of these comparisons, is just how extreme are Alaska's prevalence levels? A comparison of Alaska, Oregon, and California data for 11th graders with the findings for 12 - 17 year-olds from the National Household Study, helps to answer this question. Although the comparisons represent different time periods with respect to use of drugs, and different age groups, it does provide a way of estimating how prevalence levels compare when derived from different samples in different regions of the country.

The data in Figure 4-49 compares the results from four different surveys for five substances common to all four studies. The California 11th graders (Skager, Frith, & Maddahian, 1988), represent lifetime experience with each of the five substances limited to the past 6 months. The data for the three other surveys represents lifetime experience.

Figure 4-49
Comparison of Prevalence of Drug Use Among Eleventh Graders From Three Different Surveys with 12-17 Year-Olds from the National Household Survey



What is revealed in Figure 4-49 is that California, Oregon, and Alaska all exceeded the National Survey findings by considerable amounts, even for heroin, which is consistently low for all four samples. Because the California data is based only on past 6 month use, it can be conjectured that

these figures would have been higher if lifetime experience had been reported, and that they may have approximated Alaska or Oregon's figures.

These findings suggest strongly that the national data may be underestimating drug-taking behavior. In this context, although Alaska does show very high prevalence levels, these levels, which vary for some specific substances, may not be too inconsistent with patterns of use found in other western states. The question nevertheless prevails as to why Alaska's prevalence levels remain high.

D. Correlates: Drug Experiences and Related Behaviors

(1) Reasons for Not Trying Drugs (Excluding Alcohol and Tobacco)

Students who did not use drugs were asked to rank each of 11 reasons for not using a drug on a five-point scale ranging from "Very true of me" to "Not true of me." An analysis of the results shows the order in which each of the items were ranked:

<u>Rank</u>	<u>Item</u>
1	Not important for me to try
2	Fear of damage to mind
3	It is illegal
3	May cause addiction
3	Moral reasons
6	Disappoint my parents
7	Fear of bad experience
8	Because of something learned in school
9	No opportunity to try drugs
10	Pressure from friends
11	Knowing friends who had a bad trip

The rankings, which form an interesting array, indicated that the primary reason for not having tried a drug was because it was "Not important for me to try." The second most important reason for not trying was because of "Fear of damage to mind." Three reasons were tied for third place: "It is illegal," "May cause addiction," and "Moral reasons." Of least importance was "Knowing friends who had a bad trip," and "Pressure from friends." It thus appears that the decision to refrain from drug use appears to be more of a personal one than one influenced by peers. Concern over the adverse effects of drugs, and the fact that it is illegal, seem to be

very influential in a decision to not try a drug.

(2) Consequences of Drug Use (Excluding Alcohol and Tobacco)

Students who reported ever having tried a drug were asked to indicate the frequency (ranging from never to 4 or more times) with which they may have experienced one of seven adverse affects. Listed below is the order of occurrence, ranging from least to most frequent occurrence, based on mean rank scores for each item.

The most frequent adverse consequence of drug use was that it interfered with academic achievement or with personal friendships. Least experienced was suspension from school or having caused an injury to oneself or others.

<u>Rank</u>	<u>Mean</u>	<u>Item</u>
1	1.14	Been suspended from school (n=165)
2	1.19	Resulted in an accident or injury to you or others (n=234)
3	1.22	Gotten you in trouble with the police (n=275)
4	1.29	Gotten you in trouble with your teachers or principal (n=333)
5	1.41	Had a bad trip (n=507)
6	1.51	Gotten into trouble with your friends (n=560)
7	1.67	Had it get in the way of school work (n=615)

(3) Consequences of Alcohol

A set of questions were also assessed the adverse consequences of drinking. Listed below is the order of occurrence, ranging from least to most frequent occurrence, based on mean rank scores for each item.

<u>Rank</u>	<u>Mean</u>	<u>Item</u>
1	1.09	Gotten you in trouble with your teachers or principal (n=159)
2	1.17	Resulted in an accident or injury to you or others (n=196)
3	1.20	Gotten you in trouble with the police (n=350)
4	1.27	Had it get in the way of school work (n=371)
5	1.34	Gotten into trouble with your friends (n=509)
6	1.41	Gotten you in a fight (n=658)
7	1.43	Have driven when drinking (n=579)

The two highest ranked consequences of drinking indicate that there are two problems with serious implications: drinking and driving and fighting while drinking. Drinking and driving, which places students at risk for injury, liability and arrest, has been found to have a very high prevalence level among adolescents (Evans, 1987; Millstein & Irwin, 1988; Simpson & Mayhew, 1987). The problem has been one of significant national concern to warrant special study (cf., Moskowitz, 1987; 1988).

The second most prevalent adverse consequence of drinking interrelates with the second ranked affect of drug use, interpersonal difficulty. The least adverse consequence for drinking is problems with teachers or a school's principal.

In reviewing the two sets of findings, it appears that the primary adverse effects of drugs other than alcohol is to interfere with school work, while alcohol's chief adverse affect is drinking and driving. Common to both is difficulty with friends. The nature of these findings suggest that drinking may occur largely outside of the school setting, thereby minimizing its impact within the school and possibly maximizing problems with friends. Use of other drugs may reflect the stronger toxic effect of illicit chemical substances, which are known to interfere with cognitive processes (Newcomb & Bentler, 1988a).

4. Drug Education and Drug-Taking Behavior

Most schools in Alaska have implemented drug education/prevention programs as either part of a specialized curriculum, or as part of a more general health education curriculum. Included in the survey were questions to assess students' participation in drug education/prevention programs/lessons. It is extremely important to note that these questions were not included to evaluate the effects of education/prevention programs. The questions were included in the questionnaire to obtain some preliminary information which could be used to explore some aspects of the relationship between prevention and drug-taking behavior. Only very preliminary finding are reported herein. Subsequent reports will attempt to convey more specific findings.

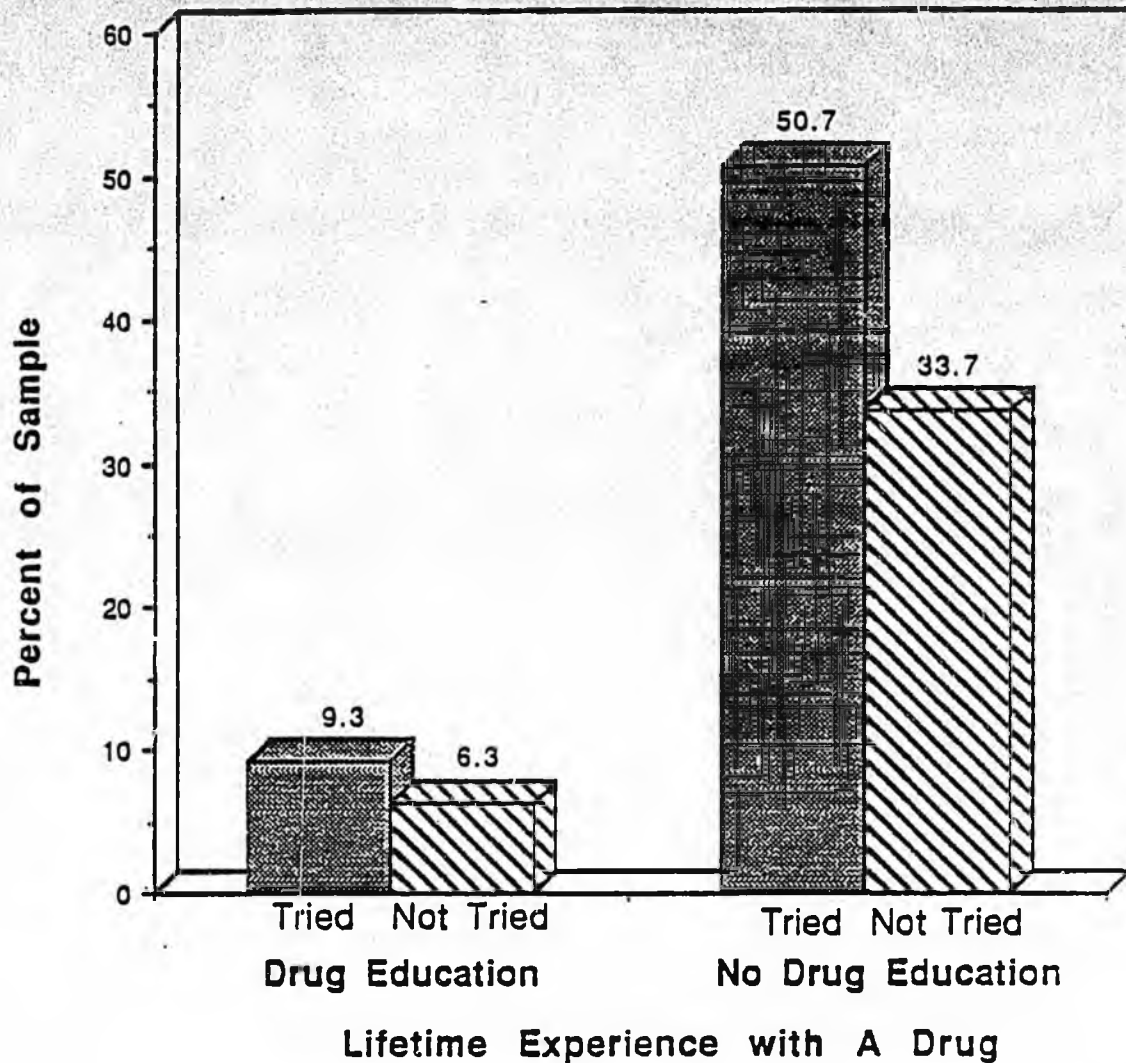
Based on students' responses to these questions, an attempt was made to assess the relationship between having participated in a drug education/prevention program and use or nonuse of drugs. Figure 4-30 shows how many students, among all students sampled, participated or did not participate in a drug education lesson, and use or nonuse of drugs. What this figure **does not convey** is whether those who tried or did not try a drug did so before or after having been exposed to drug education.

The data in Figure 4-50 shows that more students who did not have drug education tried a drug than those who had drug drug education. Also, more students who did not have drug education refrained from using drugs than those who had been exposed to drug education. What is important to note however, is that the ratio of users to nonusers within each group is relatively comparable. It thus appears that for about every one and one-half students who will try a drug, one will not, regardless of whether or not they had drug education.

The results of an attempt to explore the relationship between initiation into drug use and drug-taking behavior is shown in Figure 4-51. The information in this figure was developed by using a new variable that was derived from transformation of the data. This transformation involved equating a student's grade level with the student's age level, a process that may not represent the distribution of actual ages within class levels. Additionally, students may not have accurately reported their drug education/prevention experiences. The data described in Figure 4-51 should therefore be considered **tentative**, at best. It also needs to be noted that the data pertain only to those students who reported ever trying one of the substances listed in the Figure, and only to those students who received drug education.

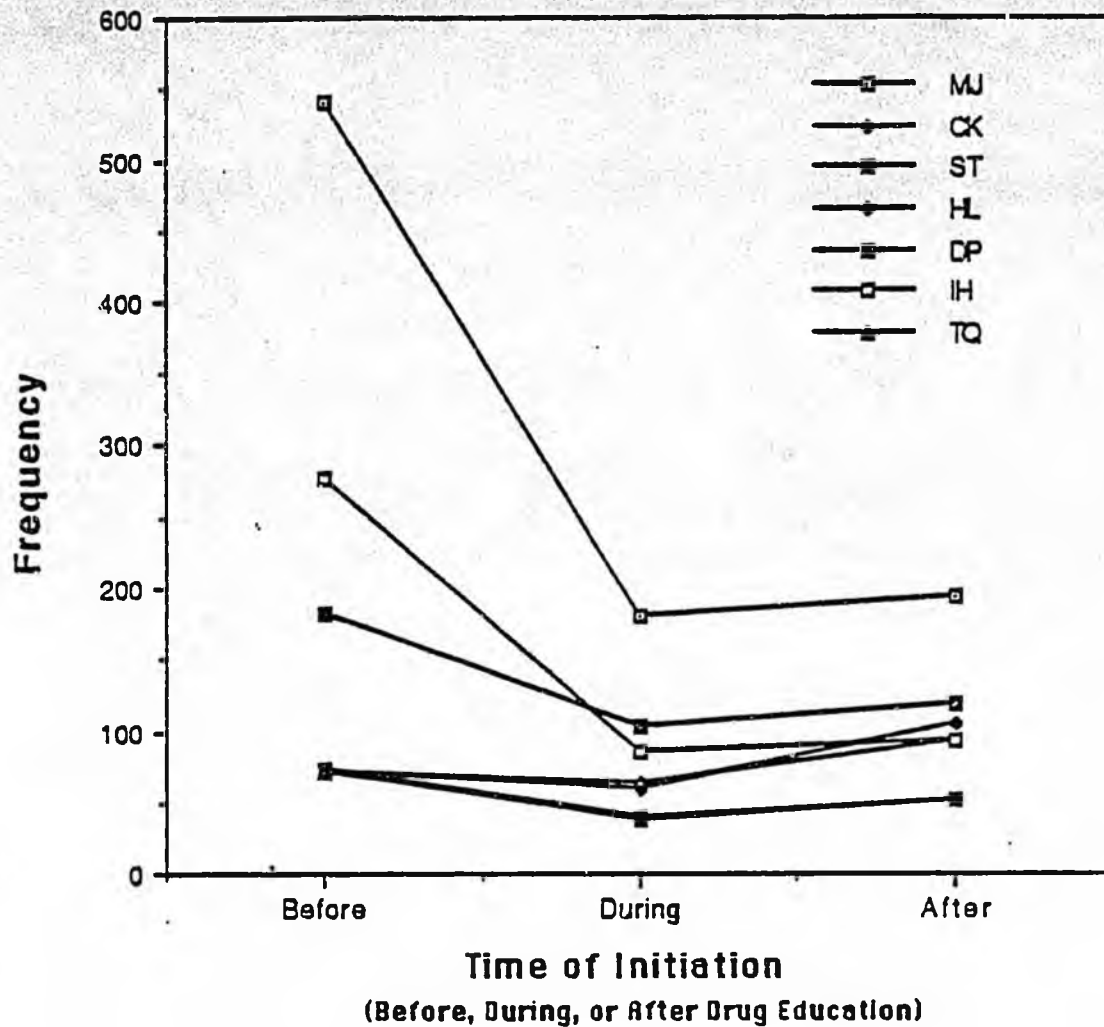
Figure 4-51, which should be considered as **exploratory data**, shows the extent to which students who tried a drug did so before, during, or after having experienced some form of drug education/prevention. The data show that initiation into marijuana, inhalants, and stimulants was generally high before exposure to drug education, while initiation into cocaine,

Figure 4-50
 Drug Education and Trying Drugs
 Total Schools
 1988



 hallucinogens, tranquilizers and depressants, occurred less frequently. Initiation into marijuana, inhalants and stimulants declined sharply during the period students experienced drug education, while initiation into the other substances remained stable or declined. After drug education either no change occurred or slight increases were noted for some substances, particularly cocaine. What the data do not reveal, however, is the extent to which maturational factors, independent of drug education, may contribute to the changes observed. More study is need to determine the nature of the relationship between drug education and drug-taking behavior.

Figure 4-51
Initiation Into Drugs Relative
to Time of Drug Education
Among Those Trying A Drug
1987-1988



Summary

This chapter reported the findings from a survey of drug-taking behavior among students in grades 7 to 12 in ten different school districts. The study revealed generally high prevalence levels for lifetime experiences with different chemical substances, alcohol, tobacco, and chewing/smokeless tobacco. The general consistency of the findings suggest that the statistics reported have validity.

When these findings are compared to national data, Alaska's youth appear to show a disproportionately high level of drug-taking behavior. Comparisons with students in similar grade levels in California and Oregon, however, reveal that all three findings show higher prevalence levels than

those reported in national surveys, and that Alaska's lifetime prevalence, for some substances, are not extremely disparate from the findings reported from Oregon and California.

Chapter 5

Results: Part II Comparing Findings: 1983 and 1988

The findings reported in the previous chapter were obtained from a second stateside survey of drug-taking behavior among students in grades 7-12. The first survey was conducted during 1981 and 1982, and involved eight school districts (Anchorage, Barrow, Bethel, Fairbanks, Juneau, Kotzebue, Nome, and Sitka). This chapter provides a comparison of the major findings from the two surveys. The 1981-1982 data is referred to as the 1983 study (Segal, 1983a). The current study is referred to as the 1988 study.

A. Comparisons of Prevalence and Patterns of Drug-Taking Behavior

(1) Opportunity to Try

Table 5-1 shows a comparison of opportunities to try chemical substances (marijuana, cocaine, stimulants, hallucinogens, depressants, heroin, inhalants, and tranquilizers). What is apparent is that opportunities to try the different substances, except for depressants, increased, some by small, others by large margins. Inhalants, for example, showed the largest increase (19.4%), followed by more modest increases for hallucinogens (5.2%) and marijuana (4.3%). Depressants, in contrast, showed a 1.1 percent decrease. The overall pattern suggests that chances to try drugs have generally increased from five years ago. The results of a statistical test to determine if the differences between the proportions for each substance were statistically significant, which indicated that some of the differences were greater than chance expectancy. The increases in opportunities to try to try marijuana, hallucinogens, inhalants and tranquilizers, were all statistically significant.

(2) Opportunity to Try and Trying Drugs

While students have apparently reported an increase in opportunities to try most all drugs, the number of students who actually tried a drug (excluding alcohol and tobacco) when an opportunity arose had generally decreased since 1983, as noted in Table 5-2. The largest decreases observed were for depressants (-20.2%) and tranquilizers (-18.0%), which were both found to be statistically significant ($p = <.01$), that is, greater

Table 5-1

Comparison of 1983 and 1988 Findings:
Opportunity to Try Chemical Substances
Eight School Districts

<u>Substance</u>	<u>1988 Percent^a</u>	<u>1983 Percent^b</u>	<u>Percent Change</u>
Marijuana	70.4	66.1	+ 4.3 ^c
Cocaine	30.5	29.0	+ 1.5
Stimulants	36.7	35.7	+ 1.0
Hallucinogens	23.3	18.1	+ 5.2 ^c
Depressants	19.0	20.1	- 1.1
Heroin	7.5	7.2	+ 0.3
Inhalants	45.2	26.8	+ 18.4 ^c
Tranquilizers	18.1	15.9	+ 2.2 ^c

^aN=3814 (Unweighted) ^bN=3609 (Unweighted) ^cp < .01.

Table 5-2
Opportunity to Try and Trying Drugs
Comparison: 1983-1988
Eight School Districts

<u>Substance</u>	<u>1988^a Percent</u>	<u>1983^b Percent</u>	<u>Percent Change</u>
Marijuana	75.9	74.8	+ 1.1
Cocaine	47.2	63.3	- 16.1 ^c
Stimulants	66.0	76.2	- 10.2 ^c
Hallucinogens	56.7	48.0	+ 8.7 ^c
Depressants	51.4	71.6	- 20.2 ^c
Heroin	26.5	29.9	- 3.4
Inhalants	57.3	61.5	- 4.2 ^c
Tranquilizers	54.6	72.6	- 18.0 ^c

^an=3814 ^bn=3609 ^cp < .01.

than chance expectancy. The declines for cocaine (-16.1%) and stimulants (-10.2%), were also found to be statistically significant ($p < .01$). The small increase noted for marijuana (+1.1%) was not statistically significant, but the increase in hallucinogens (+8.7%) was found to be greater than chance expectancy ($p < .01$).

(3) Lifetime Experience with a Drug

Table 5-3 shows the pattern of increases and decreases for lifetime experience with different drugs (excluding alcohol and tobacco). Consistent with the findings in Tables 5-1 and 5-2, increases are noted for marijuana (3.6%) and hallucinogens (4.5%). A relatively large increase for inhalants (9.4%) is also noted, which is consistent with its reported increase in availability reported in Table 5-1. All of the differences in lifetime

Table 5-3
Comparison of 1983 and 1988 Findings
Lifetime Experience with Chemical Substances
Eight School Districts

Substance	1988 Percent ^a	1983 Percent ^b	Percent Change
Marijuana	53.0	49.4	+ 3.6 ^c
Cocaine	14.4	18.3	- 3.9 ^c
Stimulants	24.2	27.2	- 3.0 ^d
Hallucinogens	13.2	8.7	+ 4.5 ^c
Depressants	9.8	14.3	- 4.5 ^c
Heroin	2.0	2.2	+ 0.2
Inhalants	25.9	16.5	+ 9.4 ^c
Tranquilizers	9.9	11.5	- 1.6 ^d

^aN=3814 (Unweighted) ^bN=3609 (Unweighted)

^c $p < .01$.

^d $p < .05$.

experience, except for heroin, were statistically significant. That is, the increases and decreases in lifetime experience that occurred, other than for heroin, were greater than chance expectancy.

Overall, the pattern of increases and decreases revealed in Tables 5-1 through 5-3 indicates that marijuana continued to show the highest prevalence level. The increase in inhalants and hallucinogens suggests a possible trend away from more expensive, traditionally "hard" drugs (e.g., cocaine) to less expensive, more available, and strongly euphoric-producing substances (e.g., inhalants and hallucinogens). Other substances, it should be noted, are prevalent, and their high prevalence should not be overlooked. Although inhalants have seemingly become more available to more students, and more students have tried them since 1983, fewer students among those who have had an opportunity to try inhalants have actually tried such substances. The overall changes in prevalence levels between 1983 and 1988, however, may be interpreted as reflecting alterations in patterns of use, and knowledge of these changes may be helpful in furthering an understanding of students' experience with different mood-altering substances.

(4) Lifetime Comparisons

Figure 5-1 shows a comparison of the overall number of students who tried one or more substances (excluding alcohol and tobacco) in 1983 and 1988. As observed, the number of students who tried a drug in 1988 increased by five percent. Thus while there has been some decline in use of different substances, the increases that occurred for other substances were sufficiently large to contribute to an overall increase in lifetime experience with chemical substances. This increase, it should be noted, comes at a time when decreases in drug use have been reported across the nation (Bachman, et al., 1988).

(5) Number of Drugs Tried

Figure 5-2 shows a comparison of the number of drugs tried. More students tried one, two, or three drugs in 1988 than did students in 1983. In contrast, more students tended to try more than four substances in 1983 than in 1988. It may be that the current higher level of drug use, noted in

Figure 5-1
Comparison of 1983 and 1988
Lifetime Experience

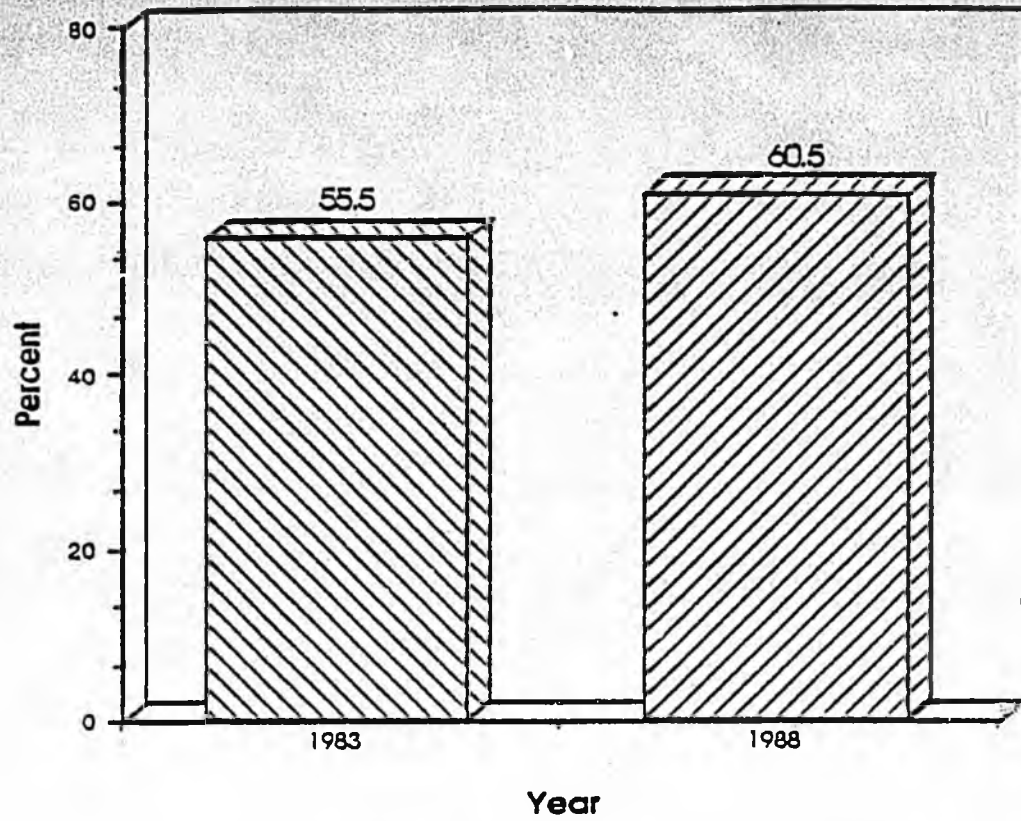


Figure 5-2
Number of Drugs Tried
1983 and 1988

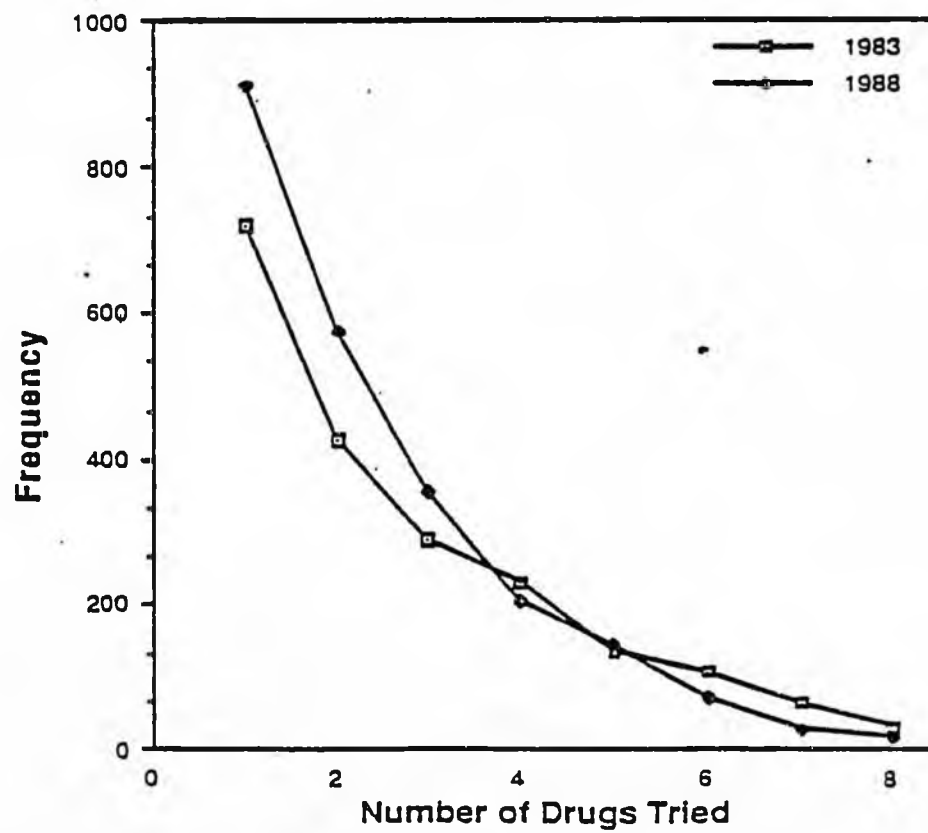
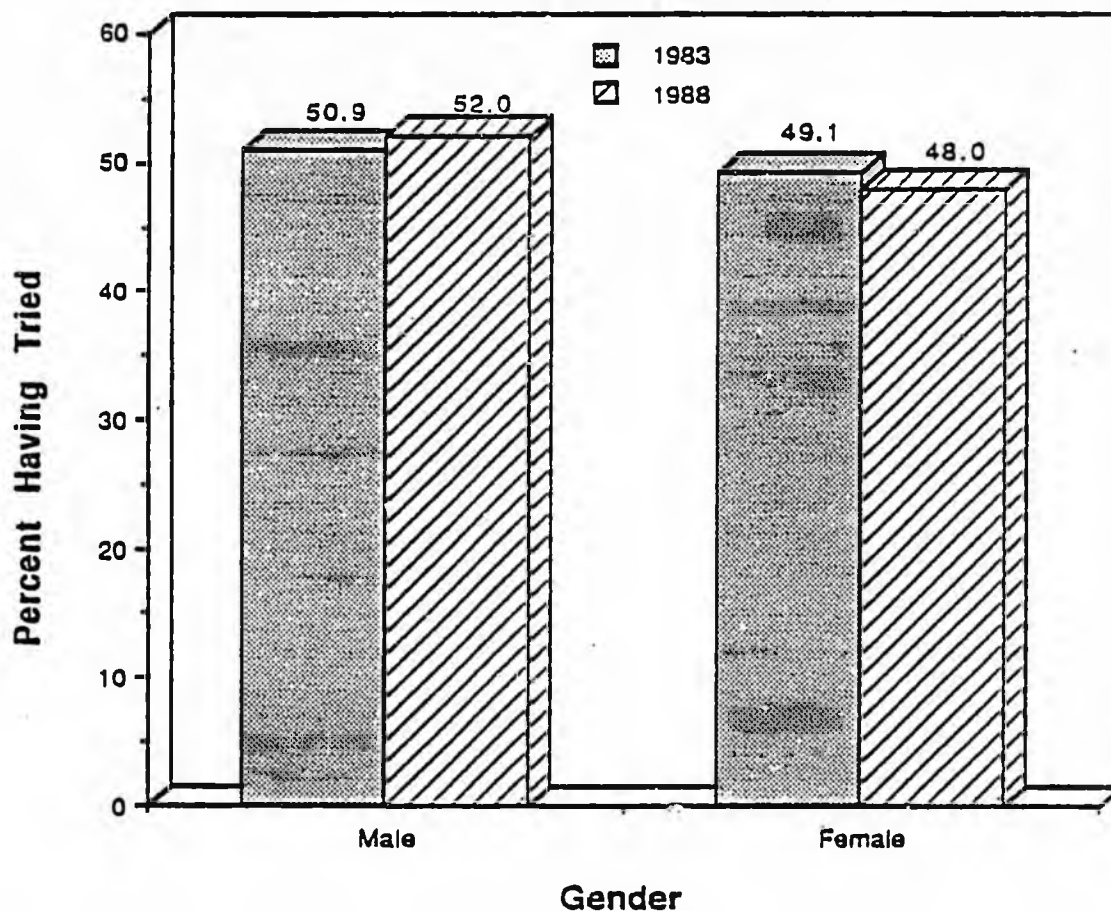


Figure 5-1, is a function of greater experimentation with drugs than that which occurred previously. This hypothesis could be tested if a comparison of the frequency of drug use were possible, but because the questions were worded differently in the two surveys, a comparison of the frequency (and recency) of drug use was precluded.

(6) Lifetime Experience by Gender

Figure 5-3 shows the proportion of male and female students who tried a drug based on all students who had ever tried a drug. The ratio of males to females remained fairly consistent.

Figure 5-3
Lifetime Experience by Gender
1983 and 1988



(7) Lifetime Experience by Grade

Figures 5-4 and 5-5 report on the relationship between lifetime experience with a drug and grade level. The data indicate the percent of students who have tried one or more drugs during or before their current grade level.

Figure 5-4
Lifetime Experience by Grade
1983 and 1988

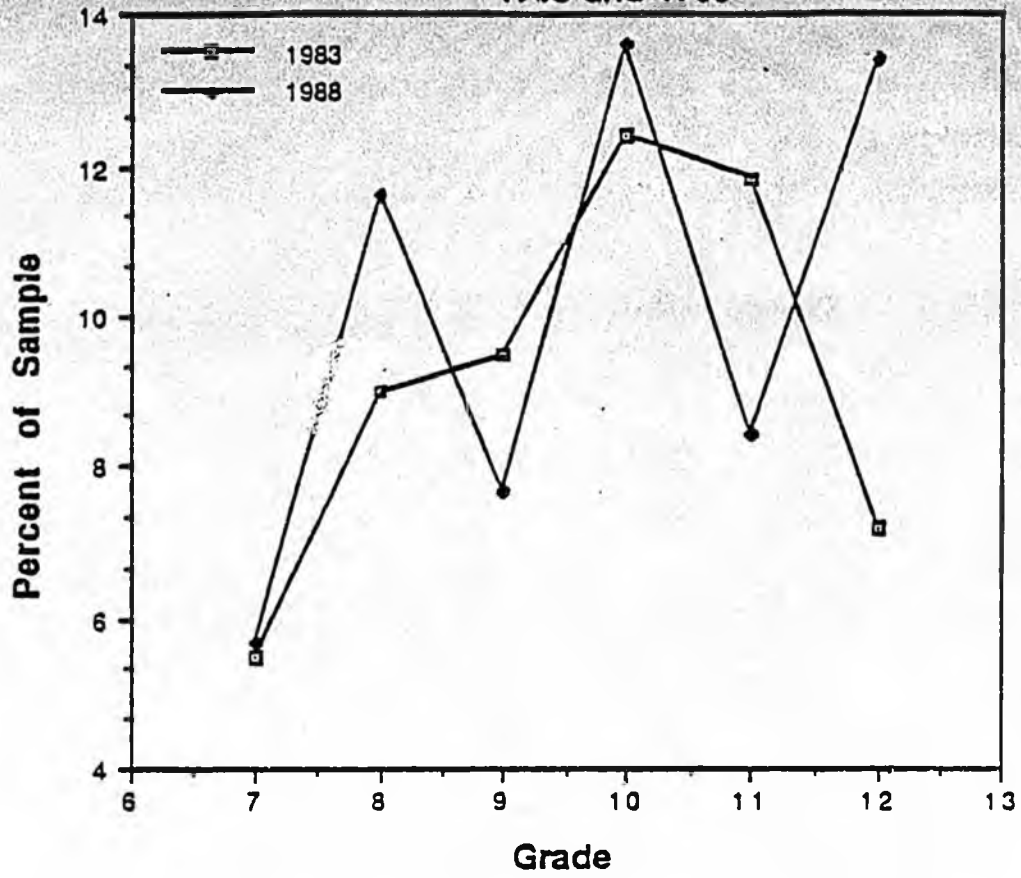
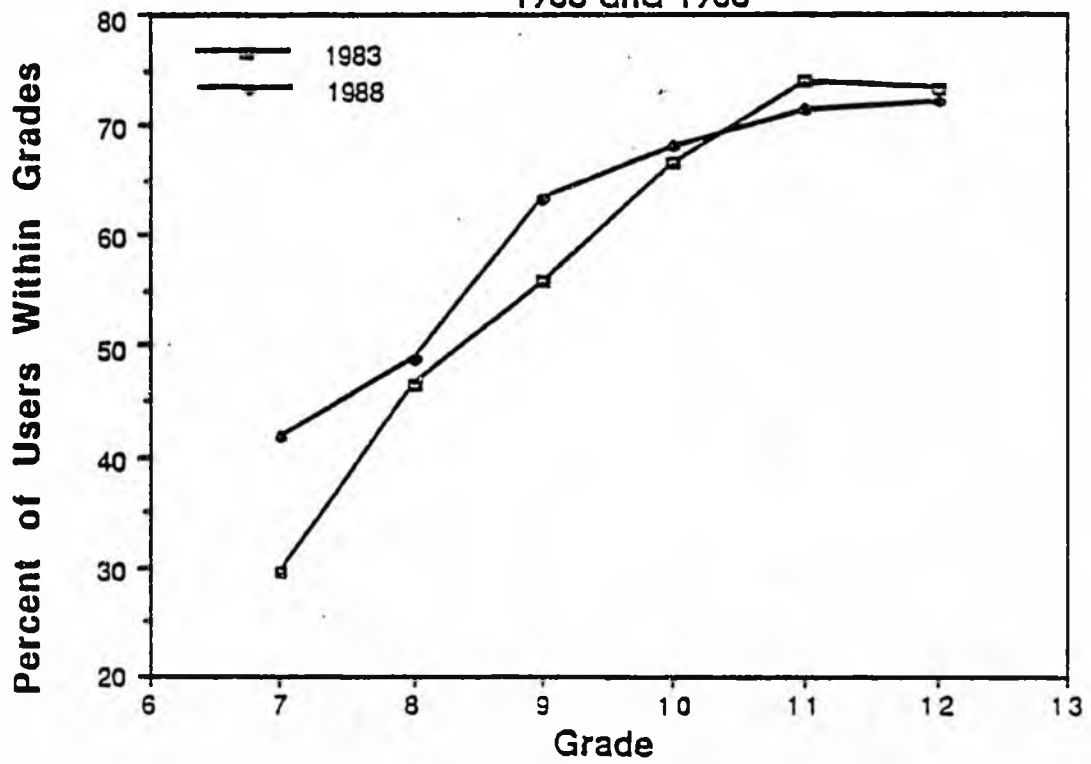


Figure 5-5
Lifetime Experience Within Grades
1983 and 1988



The data in Figure 5-4 represent the percent of students in each grade level from among the entire sample who reported ever having tried a drug. The data shows a very different pattern for 1988 than for 1983. While the data from 1983 indicated an increase from grades 7 to 9, the present findings show a comparable number of students having tried drugs by grade seven, a greater increase in the number of students who experience a drug by the 8th grade and, in contrast to 1983, a rather sharp decline in drug use among students in the 9th grade. Both samples show an increase in use for 10th grade students, but the 1988 sample shows a higher prevalence level. Use began to decline after the 10th grade in 1983, dropping sharply after the 11th grade. In the present sample, use declines very sharply in the 11th grade, but rises dramatically during the 12th grade.

When examining patterns of drug-taking behavior within grade levels, a different pattern emerges because of the nature of the analysis, which is based on a direct comparison of use and nonuse within each grade. Differences are also noted between 1983 and 1988 when a comparison is made among students within each grade level who tried drugs (Figure 5-5). While a corresponding increase in use and grade level is present for both samples, the increase for the 1988 sample is higher at the early grades (7- 9) than later grades (11 & 12). Thus more students have experienced a drug at earlier grade levels in 1988 than in 1983, while fewer have tried drugs in the 11th and 12th grades in 1988 than in 1983.

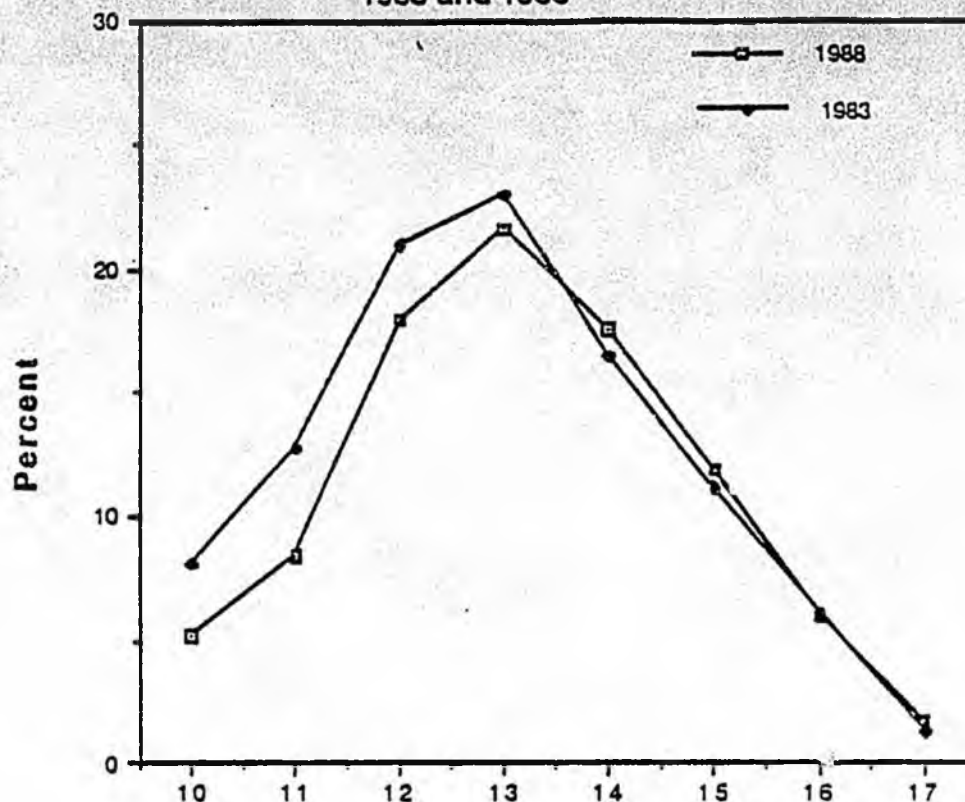
(8) Initiation into Drugs

The next series of figures compares ages of initiation into drug use for each of the different substances.

(a) Marijuana

Figure 5-6 compares initiation into marijuana. What is interesting to note is that both curves very generally approximate a normal distribution, with 13 years as the mode. In comparing the two distributions, fewer students were initiated into marijuana between 10 and 13 in 1988 than in 1983, but initiation declined for both groups after 13 years. Initiation was slightly higher at ages 14 and 15 for the present sample, while initiation levels were

Figure 5-6
Initiation Into Marijuana
1983 and 1988



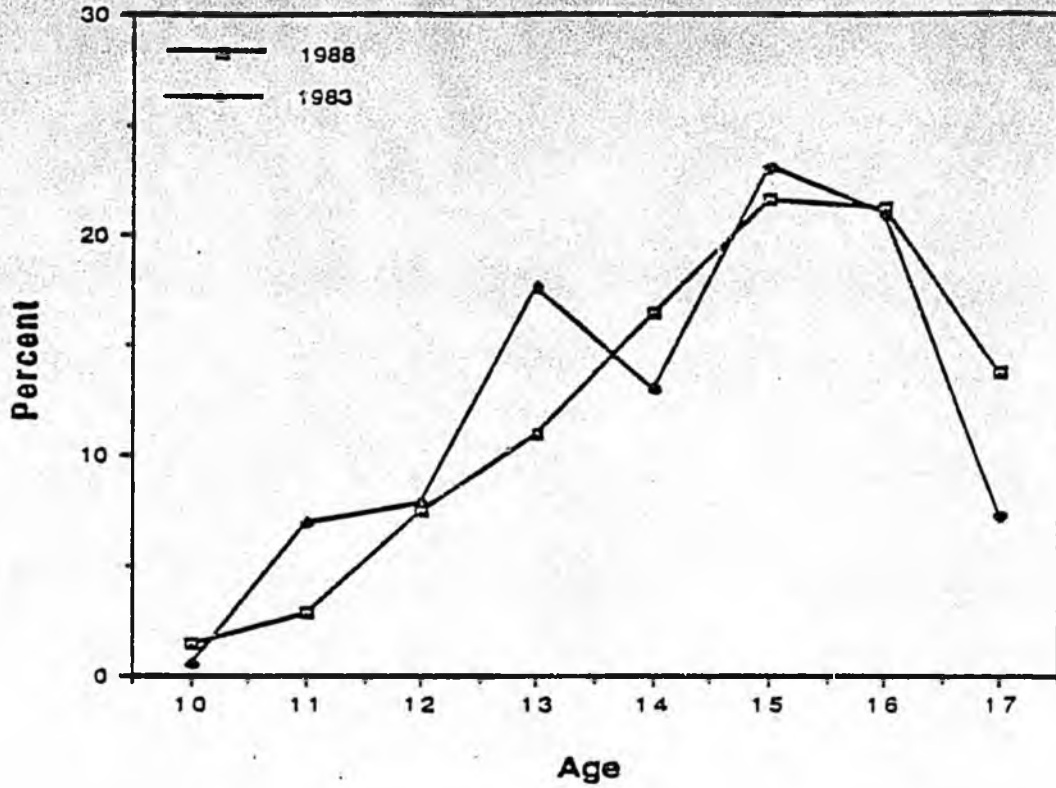
comparable thereafter.

(b) Cocaine

Initiation into cocaine shows a different pattern in 1988 than in 1983, as indicated in Table 5-7.

Overall, initiation into cocaine for the 1983 sample showed increases until age 13, with a drop at age 14, then an increase at age 15, followed by a decline. Initiation into cocaine for the 1988 sample shows a steady increase beginning at age 10, which peaks at age 15, followed by a very slight decline; only after age 16 does initiation decrease. Initiation rates were higher at ages 14 and 17 for the current sample than for the 1983 sample.

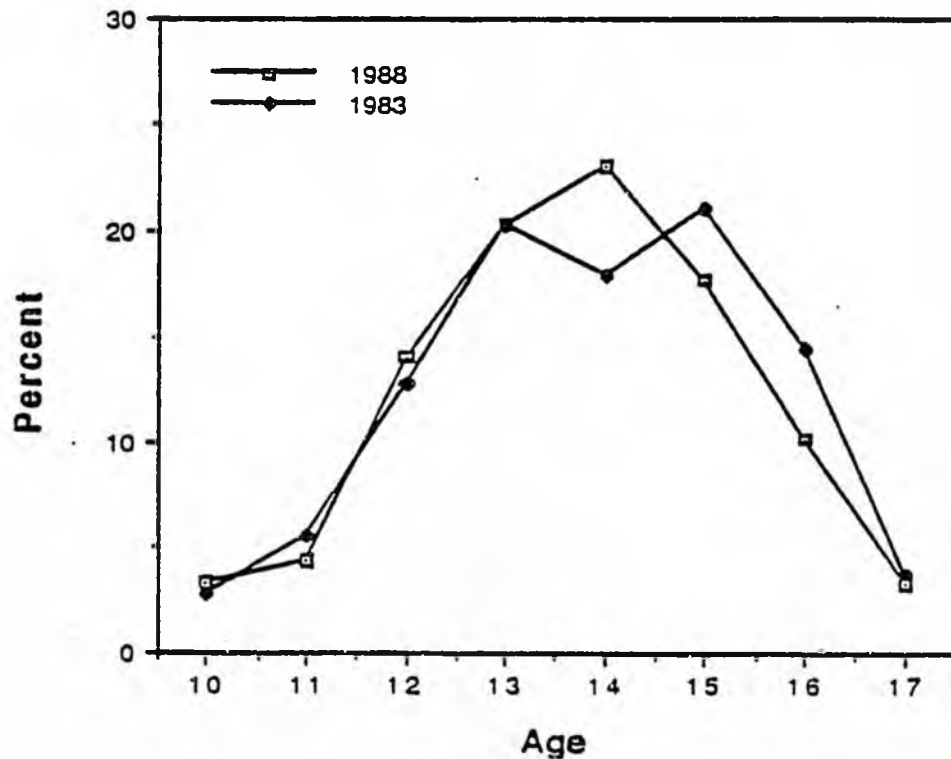
Figure 5-7
Initiation into Cocaine
1983 and 1988



 (c) Stimulants

Initiation into stimulant use shows a relatively similar pattern (Figure 5-8), but

Figure 5-8
Initiation into Stimulants
1983 and 1988

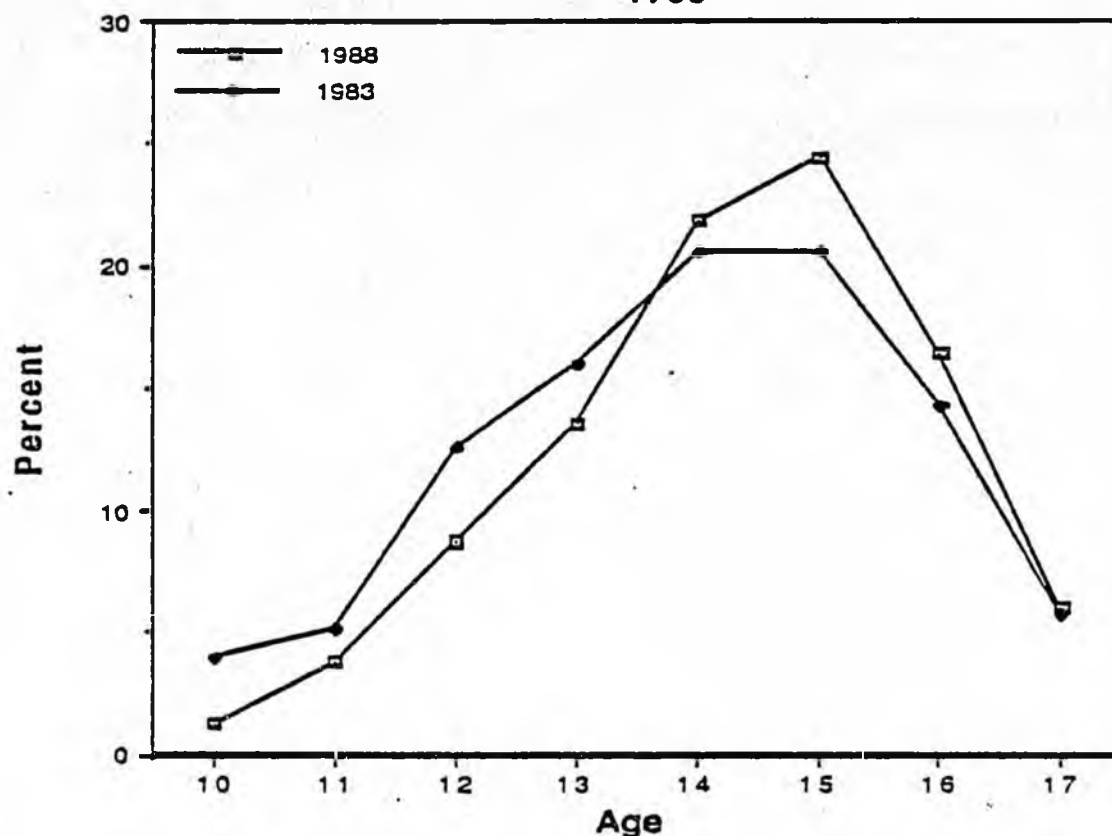


with fewer students in the 1988 sample initiating stimulant use after age 14 than in the 1983 sample.

(d) Hallucinogens

The two curves in Figure 5-9 indicate that fewer students have initiated hallucinogen use up to age 13 in the 1988 sample than in the 1983 group. But after age 13, more students in the current sample initiated use at ages 14, 15, and 16.

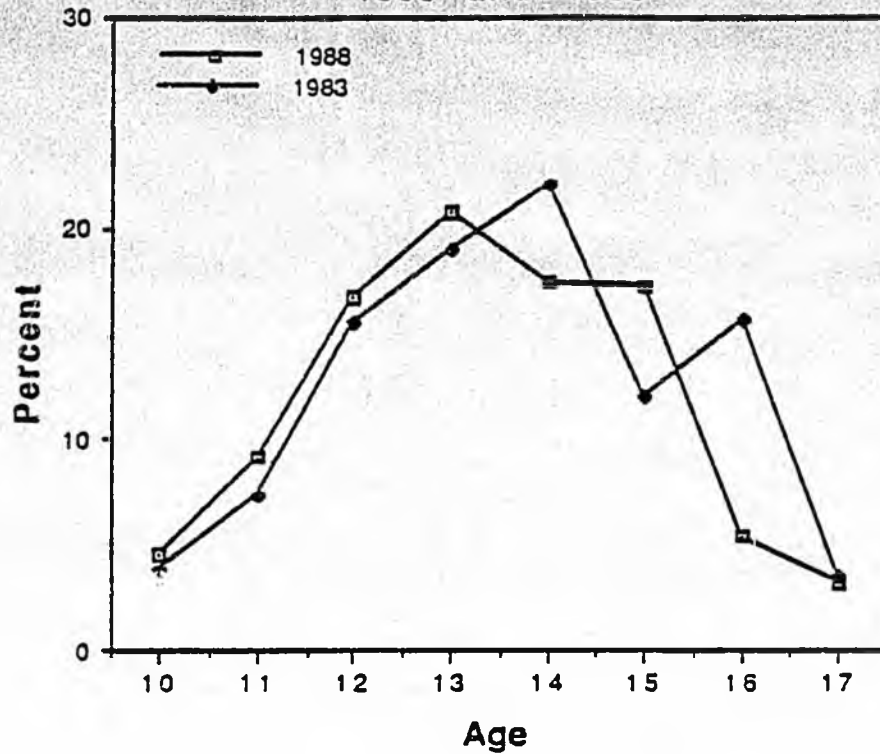
Figure 5-9
Initiation into Hallucinogens
1988



(e) Depressants

Initiation into depressants (figure 5-10) shows a varied pattern between the two samples. There was a steady increase in initiation from ages 10 to 13 for both samples, but more students had tried within this age range in 1988 than 1983. New starts of depressants begin to decline after age 13 for the 1988 sample, but not sharply until after age 15. In the 1983 sample initiation peaked at age 14, then declined sharply, but again showed a slight increase at age 16.

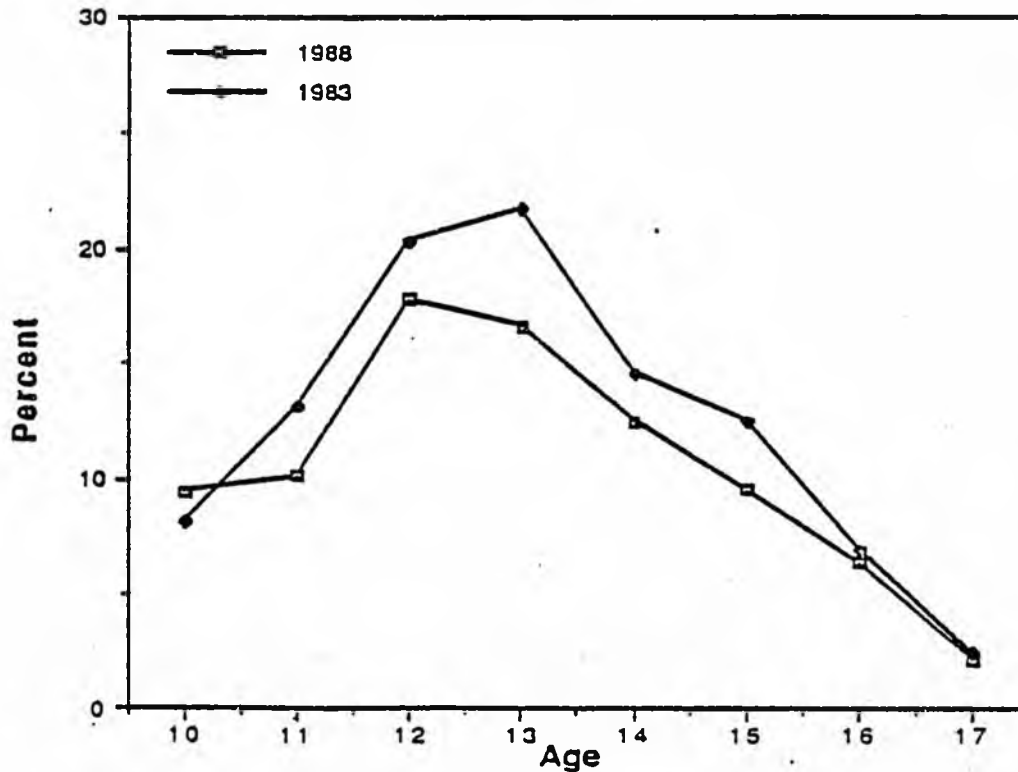
Figure 5-10
Initiation into Depressants
1983 and 1988



(f) Inhalants

Except for a slightly higher initiation level at age 10 for the 1988 sample, the overall pattern of initiation into inhalants, as shown in Figure 5-11, is fairly

Figure 5-11
Initiation into Inhalants
1983 and 1988



similar. Initiation into inhalants appears to be highest between 12 and 13, and decreases thereafter.

(g) Tranquillizers

As shown in Figure 5-12, initiation into tranquillizers occurred principally between the ages of 10 and 14, but the 1988 sample, in contrast to the 1983 group, shows an extension of initiation until age 15, after which there is a sharp decline.

Figure 5-12
Initiation Into Tranquillizers
1983 and 1988

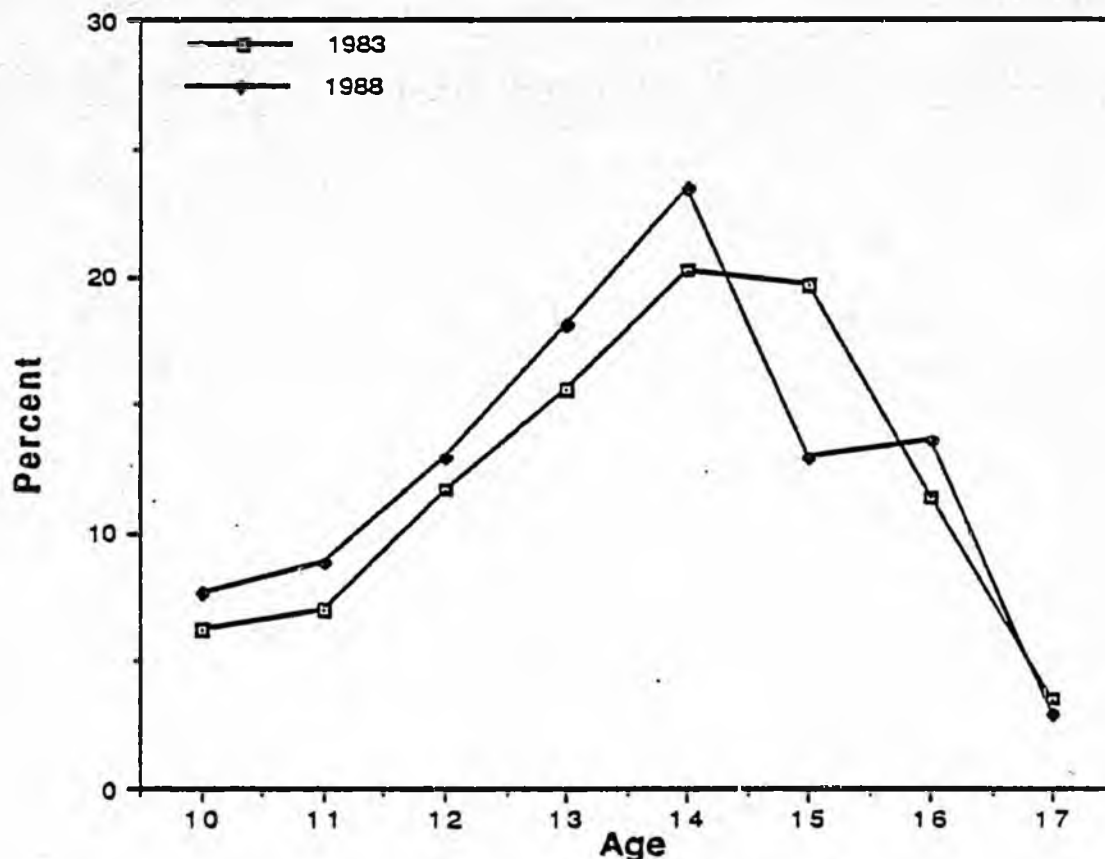
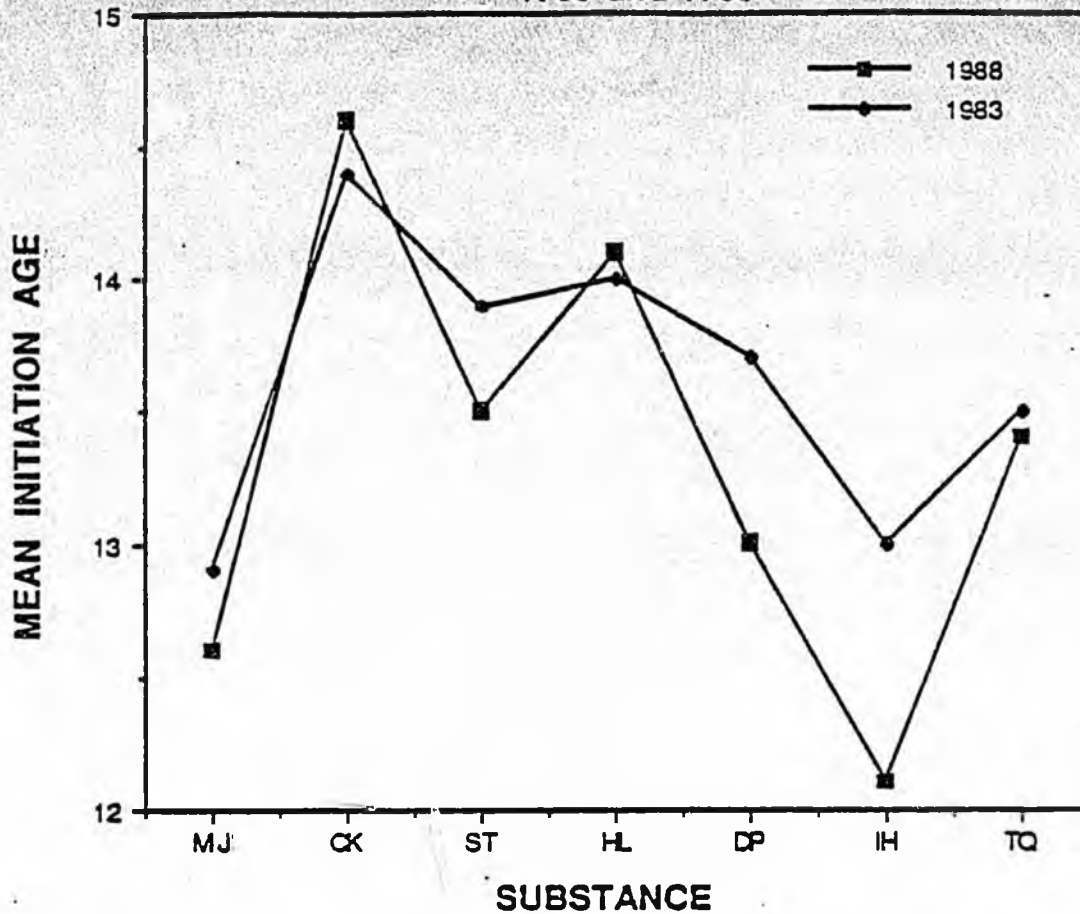


Figure 5-13 shows a comparison of the mean ages of initiation for each of the substances described above for 1983 and 1988. This figure permits a summary of the preceding data. The plot of the means in Figure 5-13 helps to illustrate the changes in initiation that have occurred for each of the substances, based on the average age of initiation. A test of significance between the mean ages of initiation between 1983 and 1988 for each substance revealed that the differences in age of initiation for marijuana (1983 mean = 12.92; 1984 mean = 12.58), stimulants (1983 mean =

Figure 5-13
Mean Initiation Ages
1983 and 1988

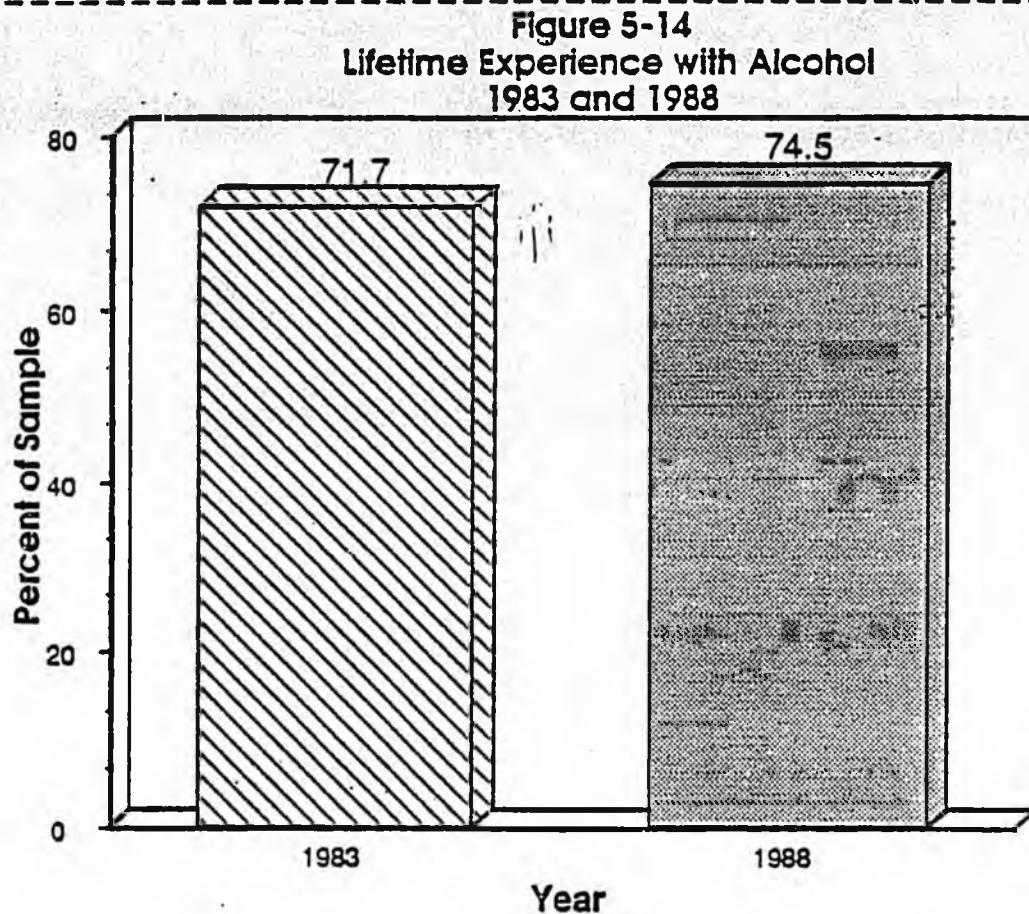


13.90; 1984 mean = 13.54), depressants (1983 mean = 13.69; 1984 mean = 13.02), and inhalants (1983 mean = 13.00; 1984 mean = 12.10), were statistically significant ($p = <.01$), that is greater than chance expectancy. There is thus a clear lowering of ages of initiation for these substances. Although the cocaine and hallucinogens showed an increase in age of initiation since 1983, the differences were not statistically significant.

Overall, the findings suggest that age of initiation covaries inversely with prevalence. Two of the three substances that showed an increase in prevalence, marijuana and inhalants also showed a corresponding decrease in age of initiation. It may be that a self-regulation process has established itself among students who have tried drugs in the 1988 sample. That is, those substances that are readily available are tried much earlier, such as marijuana and inhalants, while other substances, which may be less available and which are considered to be 'harder' drugs, are experienced later. This assumption, however, is in need of further study.

(9) Alcohol

Figure 5-14 presents a comparison of prevalence levels for lifetime experience with alcohol for 1983 and 1988. There was a slight increase (2.8%) observed for the 1988 sample.



(10) Smoking

Figure 5-15 shows that there has been a 17 percent increase in lifetime experience with cigarettes.

(11) Age of Initiation of Cigarette Use

Figure 5-16, which compares age of initiation of smoking cigarettes for the two samples, reveals that some changes have occurred. In 1988, fewer students were smoking at age 10 and 11 than in the 1983 sample, but more were beginning at age 12. After age 12 both samples showed a steady decline, but more students tended to start smoking at higher age levels in the 1988 sample than in the 1983 group.

Figure 5-15
Lifetime Experience With Cigarettes
1983 and 1988

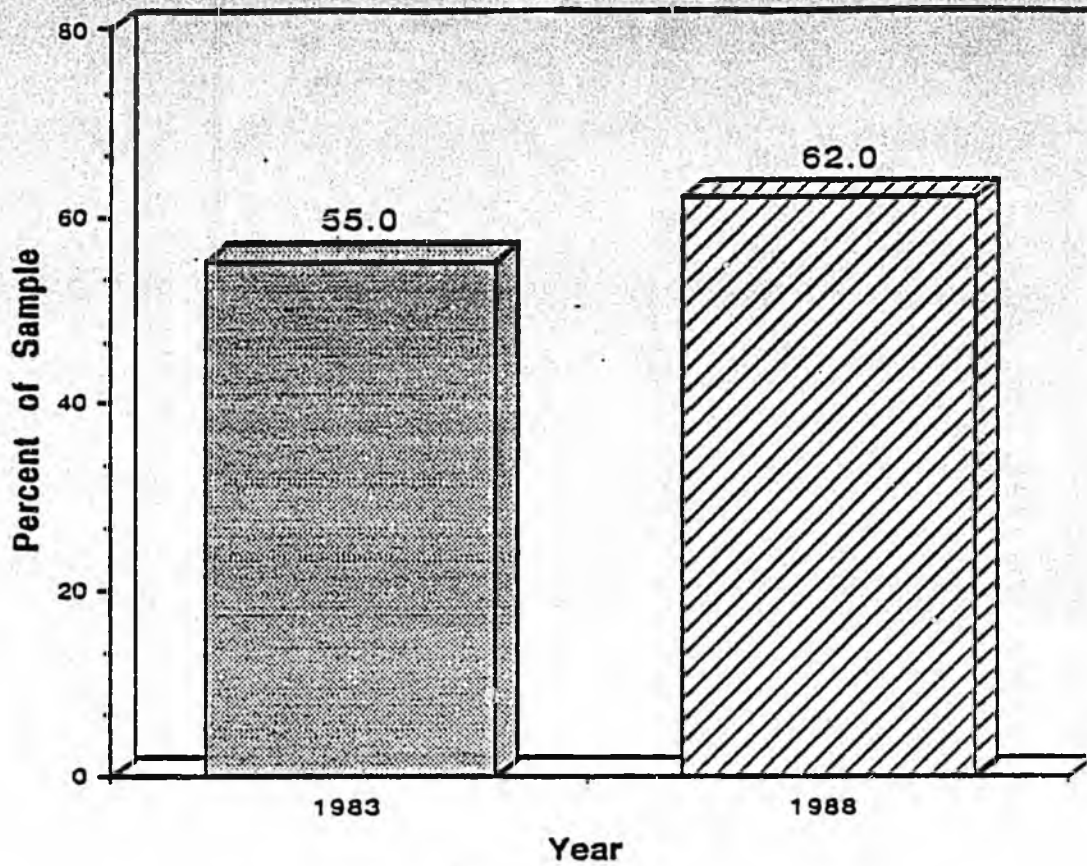
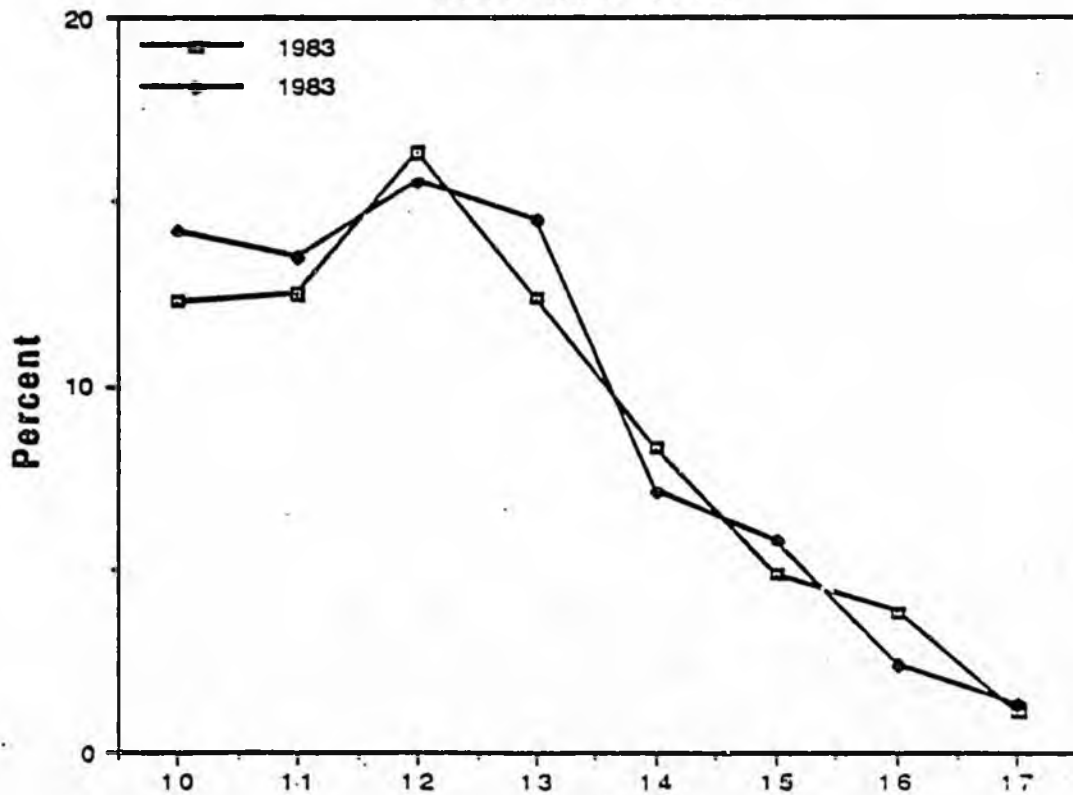


Figure 5-16
Initiation into Cigarettes
1983 and 1988



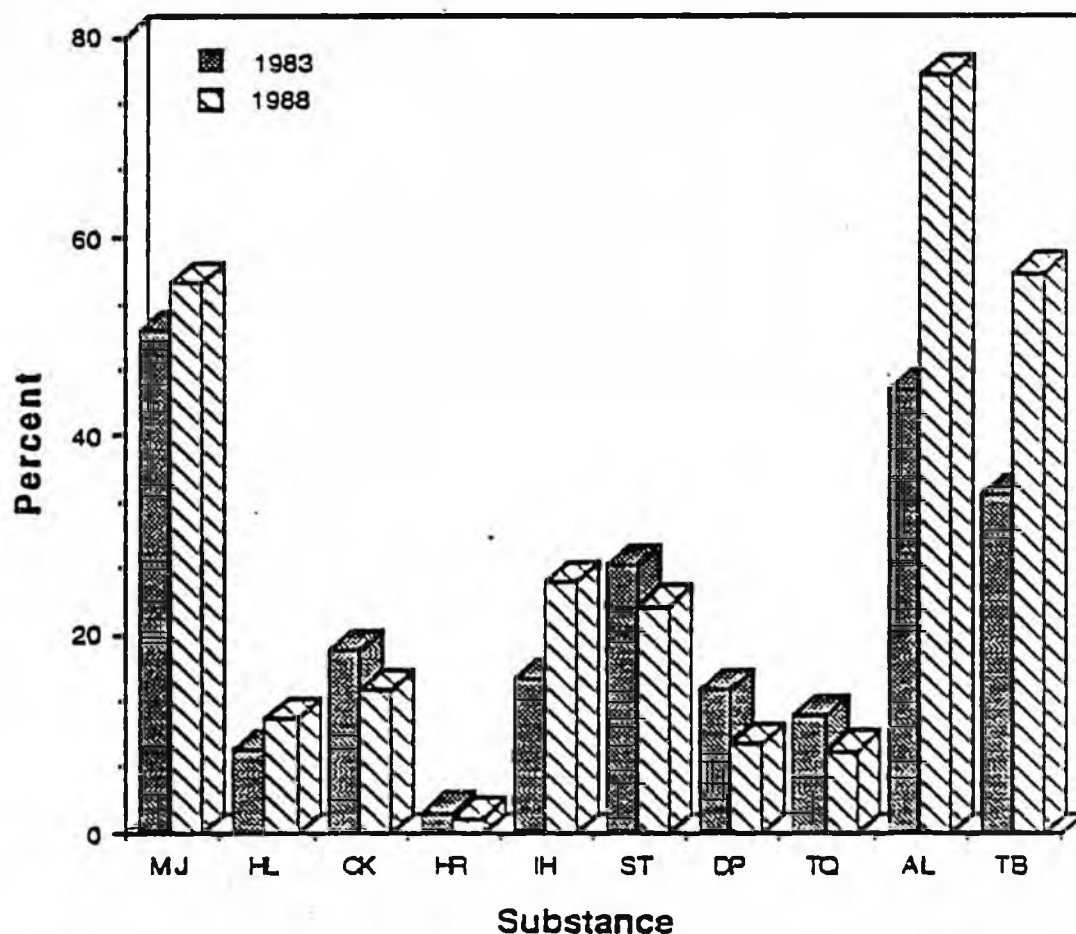
B. Demographics: Regional Comparisons

The 1983 survey provided regional comparisons of drug-taking behavior. The regional groupings were based on sampling procedures followed in the 1983 study. The following three figures compare the 1988 findings with the 1983 results using the three regional groupings formed for the 1983 study.

(1) Anchorage-Barrow-Kotzebue-Nome-Sitka

A comparison of the 1983 and 1988 findings (Figure 5-17) shows considerable changes. Alcohol and tobacco, for example, have increased, while experience with cocaine, stimulants, depressants and tranquilizers have decreased. Increases, however, are noted for marijuana, hallucinogens, and inhalants.

Figure 5-17
Comparison of Lifetime Experience
Anchorage-Barrow-Kotzebue-Nome-Sitka
1983 and 1988

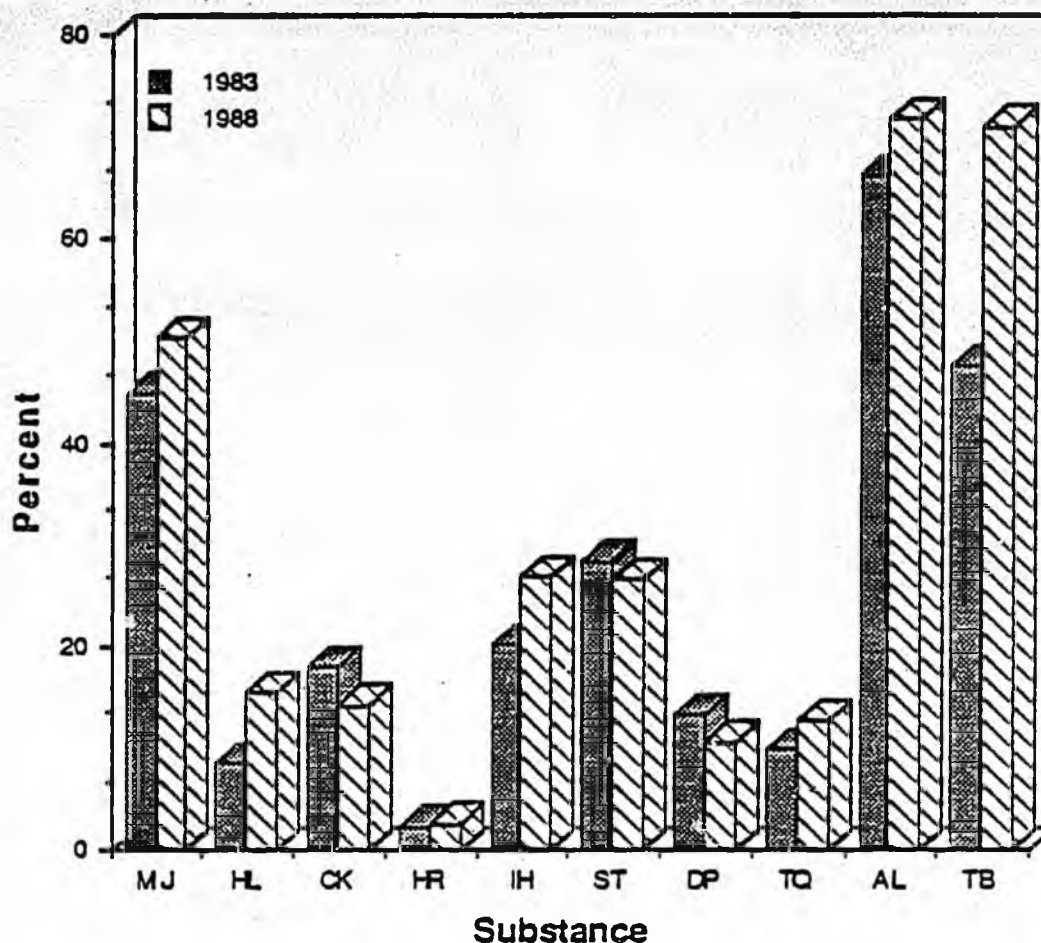


(2) Bethel-Juneau-Fairbanks

The comparisons shown in Figure 5-18 also show variations since 1983. The

largest increase is for smoking, with accompanying increases for lifetime experience with marijuana, hallucinogens, inhalants, tranquilizers, and alcohol. Decreases were observed for cocaine and depressants.

Figure 5-18
Comparison of Lifetime Experience
Bethel-Juneau-Fairbanks
1983 and 1988

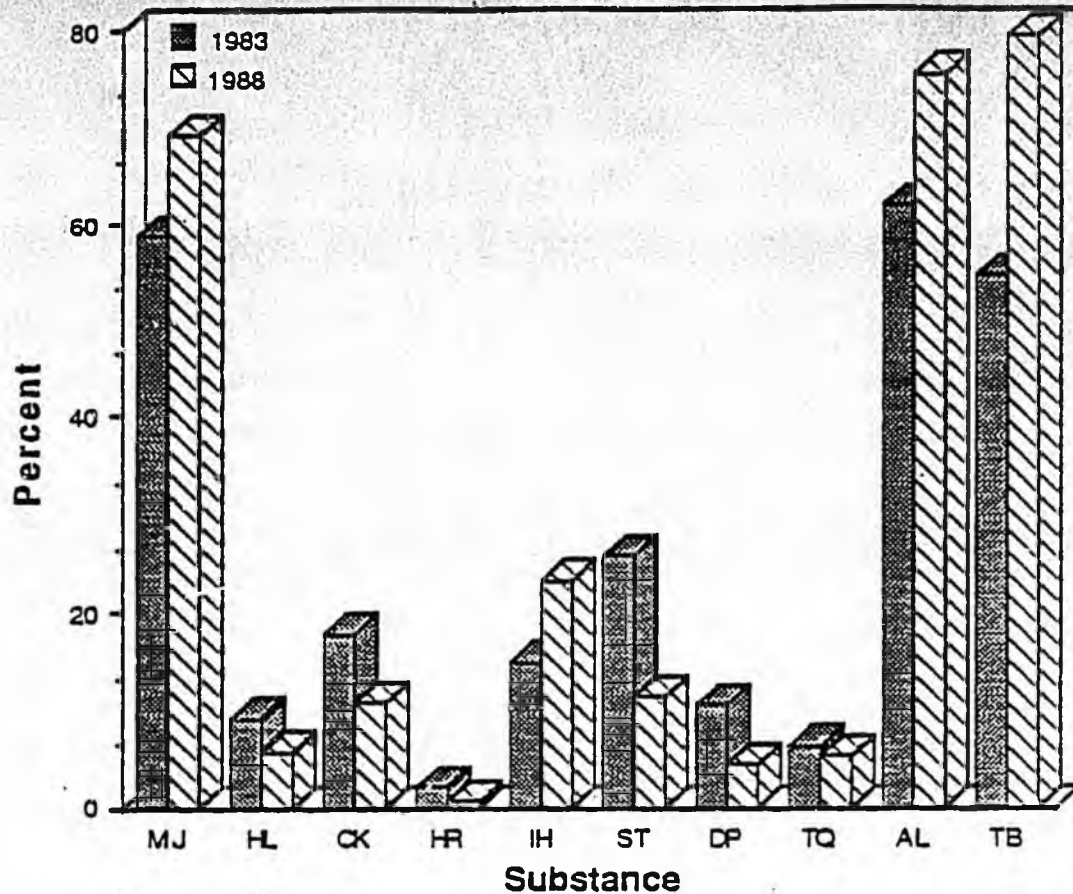


(3) Barrow-Kotzebue-Nome

A pattern of change different from the preceding ones emerged in this region (Figure 5-19). While increases occurred for lifetime experience with marijuana, inhalants, alcohol, and tobacco, as noted in the other regions, decreases occurred for hallucinogens, cocaine, stimulants, depressants, and tranquilizers.

Based on these regional comparisons, it appears that there are certain patterns of drug-taking behavior both common and unique to the different regions of the state. For example, the different regions show a common trend with respect to increases in experiences with marijuana,

Figure 5-19
 Comparison of lifetime Experience
 Barrow-Kotzebue-Nome
 1983 and 1988



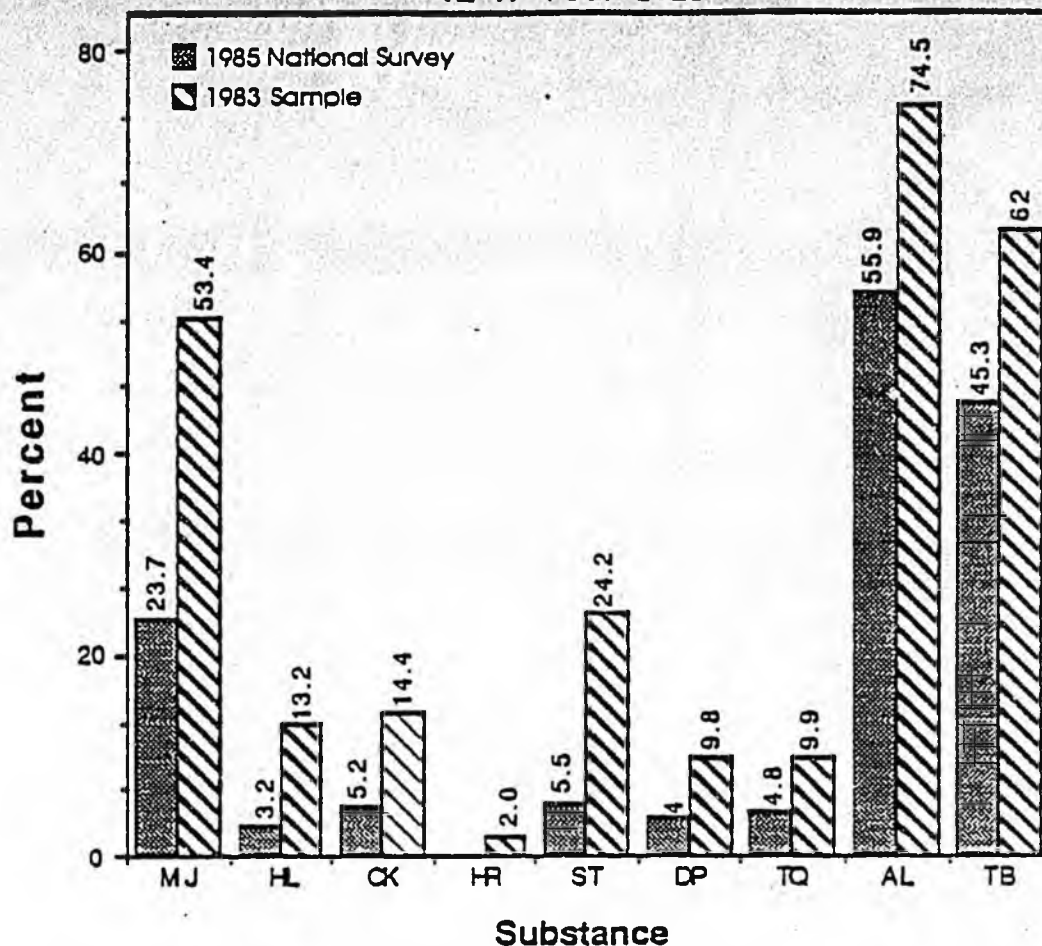
 inhalants, alcohol, and cigarettes, and a decrease for use of cocaine. Lifetime experience with the remaining substances, however, differs across regions in that some show increases while others decreased. It thus appears that there is a general pattern of drug-taking behavior common to all regions, and specific variations within regions with respect to what substances students are experiencing.

C. Comparison with National Survey: 12 - 17 Year-Olds

The 1983 report contained a comparison of the Alaska findings with the findings from the 1982 National Household Survey for 12 - 17 year-olds. A similar comparison has been made for the current eight community sample with the 1985 national Survey for 12 - 17 year-olds.

The findings in Figure 5-20 are comparable to those reported in Figure 4-45, where the results from the total study are compared with those from

Figure 5-20
Comparison with National Household Survey
Lifetime Experience
12-17 Year-Olds



the national study. Alaskan youth exceed their counterparts from the lower-48 states in every category, and by considerable margins in many instances. A discussion of what may contribute to these differences has been undertaken in the preceding chapter.

Summary

While the overall level of drug-taking behavior remains fairly high within the state, there have nevertheless been changes in the pattern and prevalence of drug-taking behavior since 1983. Most prominent is the decline in experiences of all substances except for marijuana, hallucinogens, and inhalants. Changes have also occurred with respect to age of initiation for the different substances. Marijuana, stimulants, depressants, inhalants, and tranquilizers have all shown a lowering of age

of initiation, while the ages of initiation for cocaine and hallucinogens have increased. The patterns of changes within the regions suggest that while there is a general consistency across regions with respect to use of some substances, there are also some patterns that are idiosyncratic within different locations.

Discussion, Conclusions, Implications, and Recommendations

Communities throughout the United States have been concerned with the problem of drug and alcohol use among youth for over 25 years. The particular interest in addressing this problems is based on the belief that drug use can have catastrophic consequences for youngsters who are both physically and emotionally immature, for their families, and for their community. Based on this belief, there has been a persistent struggle to understand the values and attitudes expressed by youth toward drugs, and to achieve perspectives on adolescent drug use patterns and trends. Developing an understanding of the nature of the problem 'is an essential prerequisite for rational public debate and policy making' (Johnston, et al., 1987, p. 4), both of which are crucial ingredients for planning countermeasures.

Alaska's geographical separation from the lower-48 states has not sheltered it from similar problems. Nor has it diminished Alaska's need to obtain reliable estimates of prevalence data. In the absence of such information misconceptions can develop about the nature and scope of the problem, and early detection and localization of emerging problems become more difficult (Johnston, et al., 1987).

The purpose of this research was to monitor drug-taking behavior among adolescents, specifically estimating prevalence and identifying trends. The following discussion attempts to integrate the various results obtained from the preceding series of analyses into brief summary statements of the major findings that are linked to the study's research aims. When appropriate, the implications of the findings are expounded.

(1) To obtain information on the prevalence of specific chemical substances, including alcohol and tobacco.

Overall, the lifetime prevalence for experience with one or more chemical substances in Alaska is high. More adolescents within grades 7 to 12 (59.9%) have tried one or more substances than those not trying (40.1%). Prevalence rates were also high for lifetime experience with alcohol, cigarettes, and smokeless/chewing tobacco. The present

findings indicate that prevalence levels, overall, were generally higher in 1988 than reported from the earlier study (Segal, 1983), but individual variations occurred with respect to use of different drugs.

(2) To obtain demographic information about adolescents in grades 7-12 relative to use or nonuse of chemical substances.

The pattern of more males than females trying drugs persisted, but what may be considered an important change in the relationship between grade level and drug use has been observed. The 1988 data showed a sharp decline in drug use among 9th and 11th graders, and higher prevalence levels in grades 8, 10, and 12, than found in the 1983 study. These changes cannot be attributable to differences in the number of students in the different grade levels of the current sample because the differences between weighted and unweighted prevalence levels within grades do not differ sharply (see Figure 4-12). Moreover, both the weighted and unweighted samples show a decline in prevalence for both the 9th and 11th grades. Related to this finding was an apparent change in initiation ages for different chemical substances; some, such as marijuana and inhalants, have shown earlier initiation ages, while other substances, such as cocaine and hallucinogens, have shown increases in age of initiation.

What these findings suggest is that students seem to be varying their pattern of drug use, trying some substances earlier and delaying use of others until they are older. Mention was made earlier (see Chapter 5) that a self-regulation process may have occurred, in which students first try substances that are readily available and which are not perceived as "hard drugs," and then wait to try other substances such as cocaine and hallucinogens. Early research into the initiation of drugs by youth (Kandel, 1975) suggested a normative, orderly development sequence with drugs that is represented by four stages of adolescent involvement with drugs: (1) drinking beer and wine, (2) drinking distilled alcoholic beverages, possibly accompanied by smoking, (3) using marijuana, and (4) using other drugs. Based on the findings from the 1983 research, Segal (1986) reported that the sequence or patterns of first experience with different drugs changes over time. The present findings support this statement. It is appar-

ent that different peak years exist for trying different drugs, and that this pattern changes over time.

Within the current sample, a higher percentage of students initiated smoking cigarettes at an earlier age (10 and 11) than for either marijuana or alcohol. (See figure 4-26) By age 12, however, initiation into smoking cigarettes peaks and then declines steadily, while initiation into marijuana and alcohol show an almost identical initiation pattern, peaking at age 13, and then showing a steady decline. What may have transpired since Kandel's (1975) report of what had occurred during the early 1970s regarding adolescent drug use, is that the four stages may have evolved into two: (1) smoking cigarettes, trying/using alcohol and marijuana, and (2) trying/using other drugs. Interestingly, research by Jones and Moberg (1988), who studied correlates of smokeless tobacco use among adolescent males, concluded that 'smokeless tobacco use may be a new 'gateway' substance of abuse when age of first use is taken into account' (p. 62). Given the extensive use of smokeless tobacco within the present sample, and its early initiation (see Figure 4-25), along with cigarettes, both of which exceeded the number of students trying alcohol for the first time at ages 10 and 11, any understanding of longitudinal patterns of adolescent drug use needs to focus on the relationship between smoking and use of chewing or smokeless tobacco, and the function they serve as a pathway to experiences with alcohol and other substances.

It is possible to suggest, based on the current study, that marijuana and alcohol may be used interchangeably or simultaneously. This suggestion implies that marijuana has been accepted by a significantly large number of youth and is not perceived as particularly deviant or illicit, and that they may be interpreting or perceiving its use in much the same way that the previous generation used alcohol. One of the implications of this conclusion thus involves the determination of what factors contribute to use of drugs other than marijuana, and to identifying what factors are related to initiation of tobacco products, drinking, and marijuana use. Effective reduction of use of these substances should contribute to reducing initiation into use of other illicit substances.

An examination of the relationship between ethnicity and drug-taking behavior among the total sample indicated that more Whites reported trying a drug or alcohol than any other ethnic group. Alaska Natives showed the second highest prevalence, while prevalence levels among the remaining groups were not essentially different.

A study of the proportion of youth within each of the different ethnic groups (Table 4-32) revealed that Alaska Native students showed the highest prevalence rate for ever having tried one or more drugs (73.9%), followed by American Indians (72.6%). Hispanic students ranked third (63.6), followed closely by students grouped in the "Other" category (62.3%). Whites ranked fifth (57.2%), followed by Asian-Pacific students (51.3%), and Blacks (41.1%). While the overall findings indicated that a great many students placed emphasis on achieving an altered state of consciousness provided by drugs, the findings reported for use within ethnic groups indicate that drug involvement within minority student groups is very high, particularly for Alaska Natives, American Indians, Hispanics, and students of mixed backgrounds, who are largely represented in the "Other" category, a phenomena that is consistent with findings from other researchers (Gilbert, in press; Oetting & Beauvais, 1981, 1988; Segal, 1988).

When an evaluation was made of the relationship between ethnicity and lifetime experience with each of the different substances, including alcohol and tobacco products, the pattern which emerged showed that Hispanic and American Indian youth achieved prevalence levels which were disproportionately high with respect to their representation in the sample. Alaska Natives also showed high prevalence rates for use of chewing/smokeless tobacco and for having tried marijuana.

The above findings have important implications. One is that there is a clear need to begin to understand the broad array of social and cultural interactions with regard to drug use within different cultural groups. While the behavioral and social norms regarding the use of a given drug may closely resemble each other in different ethnic groups, each cultural group may nevertheless ascribe different meanings, values and attitudes to drug use (Westermeyer, 1987). "In societies (such as Alaska, with its ethnic

diversity), where ideal and behavioral norms differ with regard to the use of a particular drug, there is likely to be a widespread use of that drug, with all its associated problems' (Westermeyer, 1987, p. 21). Ethnographic studies can help to begin to provide critical information on how cultural attitudes, values, and behaviors interact with regard to drug-taking behavior within different ethnic groups.

A second important implication is that concentrated efforts need to be directed at developing education and prevention programs that account for ethnic diversity and are responsive to the needs of a multi-cultural society. Prevention programs are usually concerned with changing attitudes about substance use (Simons, Conger, & Whitbeck, 1988). Such change, however, is largely successful among those youngsters who are most susceptible to such influences but do not impact youth who are most at risk for drug involvement (Oetting, Edwards, & Beauvais, in press). If prevention efforts can be formulated to address the cultural factors within an ethnic group that place youngsters at high risk for drug involvement, then these efforts may be influential. For example, Oetting et al. (in press), indicate that

Drug involvement (among American Indian youth) is . . . primarily a function of peer clusters; dyads and small groups of close friends who mutually encourage drug use and who use drugs together. Underlying problems, such as poor family conditions and school adjustment difficulties, tend to increase the chances that an Indian child will make friends with other youth who also have problems, and the resulting peer clusters have a higher chance of getting involved with drugs. (p. 29)

Prevention efforts thus have to be focused on changing those factors in the environment that contribute to and reinforce drug-taking behavior, rather than investing only on attempting to change attitudes about using drugs.

The problem that Oetting et al. (in press) describe pertains to all ethnic or cultural groups. The task is to identify and counteract the specific forces

or influences within each ethnic group that are related to or influence drug-taking behavior. Such programs may need to start early in a child's development to be effective.

(3) To obtain data pertaining to patterns of drug-taking behavior, including alcoholic beverages and tobacco products.

A number of important findings relevant to patterns of drug-taking behavior have emerged from this follow-up study. These are outlined below.

(a) Overall Pattern of Use

There are both encouraging and discouraging findings from the present survey. The encouraging results are that despite the fact that the opportunity to try all illicit substances except depressants was reported to have increased, the number of students actually trying a different substance when they had a chance to try it has decreased for all but marijuana and hallucinogens. Additionally, the lifetime prevalence has also decreased for all substances except marijuana, inhalants, and hallucinogens.

The discouraging results are that Alaska's lifetime prevalence for adolescents contrasts with national findings that reported a "downward trend in the use of any illicit drugs" (original emphasis) (Johnston et al., 1987, p. 15). Despite Alaska's decline in the use of some illicit drugs, Alaska's prevalence levels, except for lifetime experience with alcohol and depressants among high school seniors, exceeded those reported in national surveys. Moreover, Alaska's lifetime prevalence levels generally exceed or matched results from California or Oregon for comparably matched students. All three states, however, were higher than the results reported from the National Household Sample for 12-17 year-olds. (see Figure 4-49). The fact that all three states were higher leads to the conclusion that the national study seems to have underestimated prevalence levels, but there is no ready explanation for why this occurred.

With respect to regional differences, there are both common and unique prevalence levels within and across regions, but increases were

noted for alcohol, marijuana, inhalants and hallucinogens across all districts.

(b) Marijuana

The prevalence rate for marijuana increased by (3.6%) in 1988, and was significantly different from the 1983 prevalence level. Marijuana is the illicit substance tried by most students, and the one used most frequently. It appears that marijuana use can no longer be considered a lifestage phenomenon, that is, an event that may be experienced by some youth at a time during adolescence because it is the "thing to do." The frequency with which marijuana was used within the current sample suggests that it is not an experimental event for many students, but that it seems to have become well incorporated into the life-style of many adolescents. Life-style is defined herein as a general term that implies that a drug (or drugs) has become important to the individual. Newcomb and Bentler (1988b) have also noted that drug-taking behavior within their study group has evolved into the life-style of teenagers. This pattern of use is in very sharp contrast with reports of a nationwide decline of marijuana among youth (Bachman et al., 1988).

The extensive use of marijuana by a large number of adolescents in the state is a cause for concern because of the increasing research indicating that marijuana may have adverse effects on physical health, particularly for developing adolescents.

One of the issues involved in the use of marijuana is whether or not its effects are subject to tolerance and physical dependence. The answer to this is an issue that remains open to interpretation. Some researchers strongly contend that tolerance develops, and that the onset is quite rapid (Nahas, 1979). Others indicate that "tolerance and withdrawal symptoms with marijuana do not develop" (Cohen, 1981). Blum (1984) states, "Carefully conducted studies with known doses of marijuana or THC leave little question that tolerance develops with prolonged use" (p. 495). He goes on to note that:

The novice has a moderate degree of tolerance. With increasing

exposure, tolerance appears to decrease, so that the occasional user has a low degree of tolerance and can smoke less to get the desired results. With increasingly heavy use, it rises again so a high degree of tolerance is developed and the user can smoke ten or more joints daily and get only mildly high. Withdrawal of the drug, especially in the chronic user, may evoke a psychic response in that the individual feels the need for the drug and will seek it or some substitute. The anxiety, restlessness, insomnia, and other nonspecific symptoms of withdrawal are similar to those experienced by compulsive cigarette smokers. (p. 495)

The issue of whether one can develop tolerance to marijuana has not been completely resolved and studies continue. What is currently believed is that under conditions of heavy, sustained use, tolerance is manifested, but there is uncertainty about whether tolerance develops under conditions of low use.

There is also controversy over whether marijuana causes physical damage to the body, especially with long-term or chronic use. The research evidence suggests that some claims are substantiated, while others are in need of more research. There is general agreement, however, that marijuana intoxication interferes with overall mental functioning, driving, psychomotor functioning, and learning. The effect on learning is pertinent, since much marijuana use occurs during school hours. The psychomotor deficits can last up to 4 to 10 hours after smoking, well beyond the duration of the "high" (Cohen, 1985, p. 62).

Another substantiated effect is on the respiratory system. Marijuana tars contain 50 percent more carcinogens than high-tar tobacco cigarettes, with 70 percent more benzopyrene in marijuana than in tobacco smoke (WHO, 1981). Using marijuana thus increases the risk of bronchial problems, such as sore throats, coughing, and susceptibility to bronchitis and pneumonia. The marijuana smoker is also subject to the risk of lung cancer and other disorders to which cigarette smokers are exposed, but the risk is higher because the smoke inhaled is unfiltered and has five to ten times the cancer-causing agents found in cigarettes. This risk is moderated,

however, because marijuana smokers, in contrast to cigarette smokers, do not tend to chain smoke marijuana. Marijuana and tobacco users, however, run a risk of lung cancer that is higher for use of either substance alone.

Other adverse physical effects that have been attributed to the use of marijuana are specific damage to the endocrine, immune, and reproductive systems; organic brain damage; and chromosome abnormalities. Research also suggests that marijuana may adversely impact the reproductive system of both males and females (Blum, 1984; Nahas, 1979). Frequent use of marijuana has been linked to a decrease in levels of serum testosterone, but it appears that the testosterone level may return to normal after smoking stops. There have been no reports, however, of abnormal offspring associated with marijuana use by the father (Blum, 1984). In females the use of marijuana is believed to affect the menstrual cycle, interfering with ovulation and lowering the period of fertility (Blum, 1984). In addition, since THC passes through the placental barrier, the possibility of damage to the developing fetus is always at risk. Marijuana use during pregnancy should be avoided. Moreover, if marijuana does adversely affect hormones related to sexual development as some believe (Nahas, 1979), its use may be especially harmful during adolescence, a period of rapid physical and sexual development.

Research investigating whether marijuana causes chromosome abnormalities, endocrine disorders, and organic brain damage is being conducted, but results thus far have been inconclusive. There has also been a question of whether marijuana adversely impacts the immunity system, but research results have been contradictory (Cohen, 1985) and the question has not been resolved.

It should be noted that any unsubstantiated claim that marijuana (or other drugs) causes physical damage (e.g., chromosome damage, impairment of the immunological system) may be counterproductive because such claims make marijuana users (and users of other drugs) skeptical about any negative statements about drugs, even if such reports

are accurate and supported by preliminary research findings.

One effect that has been reported to be associated with chronic marijuana use is the 'amotivational syndrome.' The phrase was used by McGlothlin and West (1968) and Smith (1968) to describe a condition associated with regular marijuana use by youth in which the individual adopts an attitude and behavior that are asocial, nondirectional, and a 'cop-out' on established values. The amotivational syndrome is characterized by apathy, a loss of effectiveness, a diminished capacity to carry out complex, long-term plans, an inability to endure frustration and to concentrate for long periods, and an inability to follow routines or to master new material successfully.

There has been considerable controversy over whether the amotivational syndrome exists, and the debate continues. Cohen (1981) best summarized the issues concerning the amotivational syndrome as follows:

What must be remembered is that large amounts of cannabis have a depressant effect upon the central nervous system, and equivalent amounts of alcohol or sedatives also would produce a decreased desire to work, poor performance, and a blunted emotional response. One difference is that THC is retained in the brain . . . for long periods because of its aqueous insolubility.

Some young people do become sedated from considerable cannabis consumption. Others may become amotivated from discouragement about their situation, and marijuana ingestion simply reinforces their dropout from active participation in life. (pp. 37-38)

In light of the potential health risks associated with marijuana use for adolescents, the problem becomes one of developing an appropriate strategy to reduce and to prevent its use.

The question arises as to what factors may contribute to this high level of marijuana use in Alaska? Research (summarized in Bachman et al., 1988)

has found that marijuana use is high when cigarette smoking, alcohol, and other illicit drugs are present. This is certainly the case in Alaska, but is this circumstance sufficient to account for the high prevalence level? Clearly not! Thus other factors have to be considered, one of which may be that Alaskan youth, despite the information provided about the adverse consequences of using marijuana, provide social support for using marijuana. Peer group support is a very powerful reinforcer for drug-taking behavior, and its importance cannot be overstated. A subsequent section of this discussion will focus on peer group support, and will discuss other factors contributing toward use or nonuse of mood-altering substances.

(c) Cocaine

A pleasant finding was that cocaine use had declined, and that use of crack, a strong variant of cocaine, was low, but cocaine's overall prevalence level was high when compared to the findings from other research. The difference in prevalence levels between 1983 and 1988 were statistically significant. Initiation into cocaine, however, tended to be later than for other substances, but among those who tried it, a small number tended to use it with some degree of regularity.

(d) Stimulants

A decrease in stimulant use was observed, a finding complementing that reported for the nation. The chief substances in this drug category are most probably amphetamines, a strong, euphoria-producing substance. The differences between 1983 and 1988 were statistically significant.

(e) Hallucinogens

A statistically significant increase in hallucinogens was noted in 1988, with LSD most probably being the main hallucinogenic substance being tried. Anecdotal reports have indicated that it is currently available in the state and is regaining popularity after a period of some decline. Psychoactive mushrooms may also be available.

(f) Heroin

The prevalence level for heroin has been consistently low since 1983, and is generally consistent with reports from other research.

(g) Depressants

Depressants, largely in the form of barbiturates, has experienced a decline since 1983, a trend that is consistent with reports from other surveys. The difference between the 1983 and 1988 prevalence levels was statistically significant.

(h) Tranquilizers

Use of substances such as Valium or Librium, classified as tranquilizers, and used without a prescription, declined in 1988, and the current prevalence was found to be statistically different from the 1983 level, a trend which is consistent with findings from other research.

(i) Inhalants

Of all the illicit chemical substances, inhalants have shown the largest increase, which was significantly different from the 1983 level. This increase is consistent with a small increase reported across the nation by Johnston et al. (1987). Inhalants have tended to be the substance of choice among very young users, largely because they are cheap, readily available, and induce an intense altered state of consciousness, perhaps emulating the perceived experience of the substances the naive user cannot readily obtain. Additionally, older adolescents may resort to using inhalants when other substances are unavailable. Beauvais and Oetting (1987) noted that inhalant use, at every age, "marks a very high level of drug involvement for that group and suggests potentially serious adjustment difficulties. Some of these difficulties include disruptive family relationships, poor school and job adjustment, serious emotional problems, and higher levels of deviance than other drug users" (p. 781). The statistics regarding inhalants should be of particular concern because most, if not all inhalant substances, are highly toxic and can cause irreversible brain damage or death.

(j) Alcohol

Consistent with the findings from different studies of drinking among youth across the nation, experience with alcohol in Alaska is ubiquitous among adolescents. It would also seem that drinking during adolescent years no longer represents a lifestage phenomenon, but has become an

adolescent life-style phenomenon. To a large extent the drinking among adolescents could be considered to model the drinking behavior of the adult population. Given that our society is persistently bombarded by advertising that espouses drinking, there is increasing concern that this advertising, while perhaps not specifically targeted at adolescents, may nevertheless be influencing adolescents to drink (Orlandi, Lieberman, & Royce, In press). Indeed, Atkin, Neuendorf, and McDermott (1983) have stated that 'mass media advertising for alcohol plays a significant role in shaping young people's attitudes and behaviors regarding excessive or hazardous drinking' (p. 324). In contrast to Atkin et al.'s conclusion, Smart (1988), based on "a review of the effects of advertising on alcohol consumption, indicates that the affects of advertising on drinking behavior are very small compared to other variables, such as availability and pricing. It seems clear that more needs to be known about the relationship between alcohol consumption, particularly among youth, and advertising, pricing, and availability. Additionally, further research is needed to understand the nature of the relationship between adult drinking patterns in the community and adolescent drinking patterns.

(k) Tobacco

The prevalence of cigarette smoking and use of smokeless or chewing tobacco is alarmingly high in Alaska. Given the current attention to the harmful effects of smoking, it would be expected that adolescents would avoid tobacco products. To some extent, the unusually high use of smokeless or chewing tobacco might reflect an awareness among adolescents of the health risks of smoking and their turning to chewing or smokeless tobacco as a more desirable alternative. The harmful effects of chewing or smokeless tobacco, however, have been well substantiated (Health Consequences, 1986). The use of tobacco products, as with alcohol, is also tied to commercial messages about smoking, with a particular emphasis on smokeless tobacco (McCarthy et al., 1986). It is therefore critical that further efforts be made to understand the role and function of smoking and use of chewing/smokeless tobacco among Alaska's youth, and to formulate strategies to reduce adolescent's use of tobacco products.

(4) To obtain information about some of the consequences of drug use.

One of the reasons for the intense concern over teenage drug use is the belief that it can have catastrophic consequences for the user, their families, and the community. Recent research, however, (Newcomb and Bentler 1988a, 1988b) suggested that "it is difficult to prove, in a causal sense, that teenage drug use created specific problems for young adults (Newcomb & Bentler, 1988a, p. 64). Short-term consequences of acute substance use were noted, however, but varied with types of drugs used and dosage levels. The current research did not explore the ramifications of drug-taking behavior in a substantive manner. Rather, only basic information was obtained on the consequences of drug use to derive some preliminary understanding of the effects of drug-taking behavior. A special cause for concern observed in the current finding was the observation that student's reported drinking and driving. Evans (1987), following a comprehensive review of young drivers involved in automobile crashes, concluded that irresponsible driving has become a social norm among youth which is tied to the way alcohol is portrayed to young drivers, particularly males. It is apparent that effective action needs to be taken to reduce drinking and driving among youthful drinkers, but most of the commonly proposed countermeasures, such as increasing the driver licensing age, and increasing the drinking age, have not been totally effective (Evans, 1987). Recent research (cf., Lewis, 1988) has suggested that a single program directed at all youth may be less effective than developing programs that are carefully targeted according to age, subcultural group, and other characteristics of the recipients. Further research needs to be focused on understanding the impact on youth of the way in which driving is portrayed in comedy movies and television shows aimed specifically at young people. For example, how do young drivers respond to scene after scene in which they witness unbelted heroes or heroine have a major accident, jump cut of the vehicle, unharmed and undaunted, to continue the chase by other means (Evans, 1987). Answers to this question may help to develop methods to establish safer social norms, devoid of alcohol, for adolescent drivers.

One of the major questions resulting from this study is: Why do

adolescents use drugs and alcohol? Although the present research did not focus on this question, an attempt to provide some answer is possible, derived from findings in the research literature. Segal (1985-86), based on findings from the 1983 study of Alaskan teenagers, reported three basic motives for drug use among adolescents which were consistent with other findings (Anglin, Thompson, & Fisher, 1986, Segal, 1983a; Segal, Huba, & Singer, 1980). The motives were identified as follows.

(1) Tension reduction or coping, which involves seeking the euphoric effects of drugs or alcohol to alter consciousness in order to reduce or cope with stress, tension, or unpleasant or unwanted emotions.

(2) Drug effect, which involves using drugs or alcohol to obtain an altered state of consciousness primarily to experience the drug's effect(s).

(3) Peer-related, which involves using drugs chiefly in a social context, largely at the urging of friends, to enhance good times with friends (i.e., as a social lubricant).

Each of the above motives has implications for patterns of drug use. For example, students who use drugs primarily to reduce tension are at risk to progress from experimentation with drugs to abuse of drugs, and to use a variety of drugs to satisfy their needs. Students who mostly experiment with drugs may limit their behavior to trying one or more substances a few times, but some of these students may be at risk to seek different and more intense experiences, which may potentially lead to drug-related problems. Other students who try drugs as a function of peer pressure, and who initiate their drug use largely for social-recreational purposes, also share a potential for broadening their drug-taking behaviors and placing themselves at risk for drug-related problems.

It should be noted that while each of these reasons for trying drugs may in and of itself serve as a primary motive to initiate drug-taking behavior, it is more likely that they interact, with each exerting a stronger influence at different times during an adolescent's development, and also varying in conjunction with the social context in which adolescents find themselves. It

is thus likely that an interactive process is at work, reflecting a combination of several factors, each contributing a stronger effect at different times during an adolescent's personal and social development.

Johnston and O'Malley (1986) have reported very similar findings. They concluded that increased levels of drug use among adolescents was a 'both self-reflection of the more psychologically 'needy,' as well as the result of heavier users learning from their experience about the ends that can be achieved with a given drug' (p. 64). Johnston and O'Malley, as Segal (1985-86) before them, also noted that 'One conclusion seems clear . . . many of the more frequent users . . . are using . . . substances for psychological coping - that is, to deal with negative affect, boredom, . . . and to gain more energy' (p. 64). Binion et al. (1988), also reported that the most commonly-endorsed rationale for use of drugs involved the appeal of altered and pleasant sensations produced by the drugs, social facilitation, and the relief of negative affective states.

The above findings are helpful in forming an understanding of some of the psychological factors involved in drug-taking behavior. These factors, which have shown themselves to be highly replicable across independent samples, can be used to characterize subgroups of adolescent substance users based on their pattern of reasons for use. One could then proceed to develop different intervention and prevention strategies to address these different groups. For example, students identified as primarily social-recreational users (peer-related) might have a totally different characterization from those who are chiefly using drugs for self-medication (coping) or other self-enhancement motives, and both groups may differ from teenagers who try a drug just for experimentation (drug-effect) and then refrain from any further user. In those cases where the coping motive prevails, intervention and prevention efforts need to be directed at changing attitudes that link the reduction of stress with altering one's state of consciousness. In the case where drug-taking behavior is largely tied to peer pressure, efforts to help adolescents overcome the negative influences of peers seems worthwhile. This effort should be maximized at the time adolescents are at a high risk for initiation into drug-taking behavior than at a time which is

more distant to initiation into drugs.

When motives for drug use center around the drug experience itself, efforts may need to be directed to introducing alternative behaviors that would facilitate the achievement of 'natural highs.' This objective, however, has to be connected to a program that directs adolescent value systems away from attitudes held by many in our society who have come to accept drug-taking behavior as part of a life-style emphasizing the social and recreational use of drugs as a means of obtaining new and different experiences.

Helping adolescents to overcome the influences that peers exert with respect to drug-taking behavior is another important task that needs to be advanced to help combat drug use among adolescents. Efforts have to be directed at understanding how or why some adolescents are more susceptible to social pressures than others, and to learn how to use this information to effectively intervene in the process of initiation into drug-taking behavior.

Related to the problem of adolescent drug use is the question of identifying what factors distinguishes nonusers from users (Anglin, Thompson, & Fisher, 1986, Segal, 1988), and what specific characteristics differentiate those adolescents who only experiment with drugs from those who become frequent users. Part of the answers involves the extent to which each of the motives described above exerts its influence singly, or in combination, with the others.

An important predisposition to the formation of these motives, however, is the environmental background that contributes to adolescents' attitudes and behaviors toward drugs and their use. It is almost without question that family use, and the child's involvement in the process of use by family members of alcohol and other drugs, is one of the most important influences related to the beliefs and values adolescents form about alcohol and other drugs. The contemporary emphasis on children of alcoholics within our country attests to the importance of understanding the relationship between heavy drinking by parents and the extremely

detrimental impact it has on children within the family. Along with drinking, an extremely strong relationship between teenage drug use and drug use by family members has also been demonstrated (Anglin, Thompson, & Fisher, 1986; Fisher, et al., 1987; Gfroerer, 1987; Kumpfer, 1987).

It also needs to be noted that there are other important predisposing factors that contribute to adolescent drug-taking behavior that are intimately tied to the family. These consist of stressful life events encountered by youth early in life that interfere with successful adjustment during adolescence and adulthood. These events have been found to contribute to the need by some teenagers to use drugs to self-medicate a reduction in their level of stress. Youth at high risk for substance abuse have been found to have been either physically abused, sexually assaulted, or psychologically maltreated (Black, Bucky, & Wilder-Padilla, 1986; Dembo, et al, 1988; Farber, 1987; Kroll et al., 1985; Sandberg, 1986). Such youngsters, regardless of whether they are male or female, tend to show evidence of depression, suicide, psychotic thinking, and aggressive behavior at some point in their life, and alcohol and drug use may reach an extreme in their attempt to cope with their disorganized state.

The above discussion does not pertain to all adolescents who have experienced alcohol or other mood-altering substances, but it may help explain why some initiate drug-taking behavior earlier than others, use more illicit drugs or drink alcohol more frequently, and encounter greater difficulty resulting from their drug-taking behavior.

It also needs to be noted that not only parents, but peers can also have a strong influence on adolescent drug-taking behavior, the degree of influence for each varying at different ages and stages of development. Kandel (1986) has pointed out that peer influences predominate on current life-style influences, while parental influences are especially strong with respect to basic values and future life goals and aspirations.

A recent report by Oetting and Beauvais (1987) may help to provide a perspective on peer influence on drug-taking behavior that is particularly relevant to Alaska. Their concept of 'peer cluster theory' contends that

'peer clusters shape and determine the attitudes, values, and beliefs about drugs . . . and, to a great extent, determine the actual drug-taking behaviors - what drugs are used and when, where, and how they are used' (p. 206). A peer group is defined as a group with which a youth is associated. A peer cluster is a very small subset of peers that closely share attitudes, values, and beliefs. Given the geographical isolation of Alaskan communities, especially those accessible only by air, peer cluster theory becomes an interesting concept that can help to explain why Alaska's prevalence levels are so high.

In the context of the theory, peer clusters are likely to use the same drugs, use them for the same reasons and use them together. Given the geographical isolation within Alaska, it seems that young people with similar attitudes toward drugs would seek each other's company and would thus tend to reinforce each other's drug-taking behavior. Oetting and Beauvais (1987) have found a significantly strong relationship between a youth's drug use and his or her association with peers who encourage drug use.

Another important aspect involved in attempting to develop an understanding of adolescent drug-taking behavior is the issue of whether such behavior is deviant. There is one point of view that has generally viewed any form of drug-taking behavior by youth as bad or deviant (Donovan & Jessor, 1985; Jessor & Jessor, 1977; Kandel, 1975b; Kandel et al., 1978; Kaplan et al., 1982; Osgood, 1985; Smith & Fogg, 1978, 1980). A contrasting view has been advanced by other researchers who interpret experimental or limited social or recreational use of drugs as not necessarily deviant. Rather, such behavior is perceived as more of a function of behavioral styles that interrelates with interpersonal and sociocultural factors. In this context those who are more likely to try drugs show higher levels of rebelliousness, autonomy striving, liberalism, and a willingness to try new experiences, when compared to their nonusing counterparts (Segal, 1988).

The characteristic of rebelliousness does not include defiance or alienation as part of its definition. Rather, rebelliousness represents a

breaking away from conformity and an indifference to social consciousness or to presenting oneself in a favorable light. There is a flouting of or contempt for rules and regulations, which may, in large part, seek its expression in drug-taking behavior.

Autonomy strivings represent an attempt to break away from constraints or restrictions, such as parental and societal controls. There is an enjoyment of being unattached, free, and without any obligations. This need for autonomy and rebelliousness are highly interrelated; if autonomy strivings are experienced as being frustrated, then rebelliousness may intensify and encompass defiance and an overt contempt for conformity.

Liberalism represents an openness to new ideas and knowledge, together with policies that allow freedom for individuals to act or express themselves as they choose. Use of drugs is interpreted as a right of personal choice rather than as deviant behavior.

The desire for new experiences characterizes those who might experiment with drugs, or use them with some degree of regularity, as part of a tendency to seek out new and different, exciting or stimulating experiences; the psychoactive properties of drugs readily provide such stimulation (Segal, 1988; Thompson, et al., 1985).

It should be noted that the characteristics described are very general, and apply to those involved in nonproblem, limited recreational or experimental drug-taking behavior. These personality characteristics, when grouped together, are attributes that tend to reflect a general life-style that seems to prevail among many of those who try or use drugs. Involved in this life-style is a tendency to seek out new experiences and a willingness to try high-risk activities, including taking drugs. It does not appear that there is any implication that "deviance" accounts for the strong relationship between what may be called "sensation seeking" and drug-taking behavior (c.f., Bates et al., 1986; Margot, 1986; Segal, 1988; Zuckerman, 1983). Rather, it appears that initiation into drug-taking behavior, particularly for youth, may be best understood as a means of fulfilling a need to undergo new experiences, even if it involves

unconventional behavior. Such behavior, it should to be noted, is far removed from the traditional problems of narcotic dependence and other forms of drug-related problems. With pervasive use of drugs, however, the probability of associated "deviance" increases greatly; that is, using drugs may begin to serve needs other than just seeking stimulation as part of one's life-style.

In terms of what all the above means for prevention of drug-taking behavior, it is apparent that any attack on adolescent drug use cannot focus on the drug alone. Any prevention effort must include dealing with problems resulting from family disruptions, personal problems, and peer influences, as well as reducing the availability of drugs. Effective prevention may be achieved only by dealing with the various factors that promote drug-taking behavior. Only a comprehensive educational program that takes into account most of the factors that affect the target population may prove to be effective. School-based prevention programs that focus on a single factor may be beneficial for some adolescents and destructive for others (Kirschenbaum, 1983). Contemporary prevention efforts need to begin to focus on health promotion and health protection as a primary way of preventing drug use. One of the ways in which prevention efforts can more successful is to help students sever the perceptual link between drug use and coping behavior and drug use and mood change, and to foster new behaviors that provide more desirable and more rewarding alternatives than using drugs. The major task that lies ahead is to formulate strategies or procedures that will help to break this perceptual link.

An important issue which is of considerable concern in Alaska is what is the relationship between Alaska's decriminalization of marijuana and its apparent high prevalence in the state? There is no easy answer to this question. Any attempt to assess the impact of decriminalization is fraught with difficulty. It is hard to determine the consequences of the legal change. For example, if marijuana use has increased, is this increase a function of greater recognition of the problem because of a greater emphasis on law enforcement, or a function of increased use because of less severe penalties? Depending on one's views, several contrasting

conclusions can be made about decriminalization: (1) decriminalization has had little or no effect on patterns and extent of marijuana use, (2) that marijuana use has significantly increased following decriminalization, or (3) that the social problem caused by marijuana abuse, at least as reflected in law enforcement costs, has decreased following legal change.

There is also the very real possibility that it is not the legal change per se that is most significant, but rather a whole set of other factors that may interact with decriminalization to contribute to the level of drug use in the state. Changes in patterns of law enforcement, drug availability, age of users, and self-perceived benefits or risks, all combine to form a complex interaction which may have no effect or very direct consequences on the prevalence of marijuana use.

Another concern of the research is the validity of the self-reports of the students. The validity of self-reports is always questioned, particularly when the self-reports concern a sensitive topic such as drug use. Although every effort has been made to obtain reliable and valid results (see Chapter 3), it is not known to what extent students who reported having tried a drug actually experienced the substance, that is, whether they used the real drug as opposed to a look-a-like or a substitute substance. The important fact, however, is that the students apparently believed that they took the substance, and reported its use. The extent to which students who used a drug and did not report its use (false negative) is not known. Nor is it possible to determine the number of students who did not use a drug but who indicated that they did use it (false positives).

The data, however, are remarkably consistent across districts, and generally consistent with the 1983 findings, suggesting that reliable and valid results have been obtained. With the proliferation of survey research over the past 15 years, concern over the accuracy of self-reports by adolescents has shown that such reports tend to be valid (Campanelli, Dielman, & Shope, 1987).

In conclusion, it is important to note that the recent history of attempts to deal with the problem of drug abuse through strong legislation aimed at

punishing the user and penalizing distributors has not worked in the United States. Such efforts have resulted in a preoccupation with punishment, which has not resulted in an overall reduction of drug use. It has been shown that punitive approaches place an unfair and sometimes overwhelming burden on the justice system, leading to an unrealistic expectation that law enforcement agencies will eliminate the problem. Energy needs to be invested instead towards focusing on youth and on the circumstances that contribute to their use of drugs.

What is needed is an integrated approach that brings together representatives from the legal, social, and health professions, educators, legislators, and governmental authorities to pool their resources, experience, and knowledge to develop a rationale and comprehensive public policy aimed at reducing the problem of drug and alcohol abuse in the state. Accomplishing this objective, however, requires that an investment of funds be made to support the implementation of public policy procedures directed at reducing alcohol and drug abuse.

While the Department of Health and Social Service's Office of Alcoholism and Drug Abuse provided financial support, the recommendations and conclusions of this paper represent the opinions of the author and not necessarily those of the department.

Glossary

This section is provided to acquaint the reader with precise definitions of the terms and concepts used in the report. Included in this glossary are definitions of substances and frequently used terms, as well as information on reading tables and graphs, as well as information on the statistical terms. Phrases are listed in alphabetical order.

- Adult Defined as persons 19 years and older.
- Adolescent Used in this report to define the sample population - students in grades 7 - 12 regardless of age.
- Alcohol Any beverage that contains ethyl alcohol (ethanol), the intoxicating sedative-hypnotic in fermented and distilled liquors. For purposes of this research, beer, wine, and distilled beverages have been classified under the single category of alcohol.
- Amphetamines A general name given to a class of drugs that act with a pronounced effect to stimulate the central nervous system. See Stimulants.
- Barbiturates A synthetic sedative-hypnotic substance that sedates the central nervous system. See Depressants.
- Cocaine A short-acting behavioral stimulant, refined from the coca plant, used in the form of a white crystalline powder, usually through snorting, taken to induce a rush which involves a feeling of intense euphoria and a sense of well-being.
- Confidence Interval The range of values within which a population value is estimated to lie.
- Confidence Level The estimated probability that a population value lies within a given confidence interval. The confidence level used in this research is $p = .05$, which means that 95 out of 100 times a given statistic lies between the lower and upper limits of the confidence interval.
- Current Use Used a drug during the past 30 days.
- Depressants Any drug that depresses the central nervous system resulting in sedation and a decrease in bodily activity. At mild doses they induce a state of euphoria similar to alcohol intoxication.
- Drug In a purely biological, scientific sense, any substance, natural or artificial, that by its chemical nature alters structure or functioning in the living organism. For purposes of this research, a drug is defined as any

chemical substance that alters mood, perception, or consciousness. Alcohol, cigarettes, and chewing/smokeless tobacco are classified as drugs.

<u>Ever Used</u>	See Lifetime Prevalence
<u>Frequency of use</u>	The absolute number of times a drug is taken either in general or for a specific time period.
<u>Hallucinoagens</u>	A major classification of natural and synthetic drugs whose primary effect is to distort the senses; they can induce visual, auditory, and other hallucinatory experiences, or a feeling of separation from reality. LSD, PCP, mescaline, peyote, and psilocybin are classified as hallucinogens.
<u>Heroin</u>	A semisynthetic opiate produced by a chemical modification of morphine, taken to induce a subjective experience characterized by an extremely pleasant, euphoric state, feelings of warmth, well-being, peacefulness and contentment.
<u>Inhalants</u>	A major classification of depressant drugs incorporating an aggregate of diverse chemicals - solvents, aerosols, and anesthetics - that are usually sniffed and whose effects are short-lived. Inhalants are taken to induce a intense euphoric state.
<u>Lifetime Prevalence</u>	Have ever experienced a drug one or more times during one's life.
<u>Marijuana</u>	A mixture of the crushed leaves, flowers, and small twigs obtained from the hemp plant. Usually smoked to induce a feeling of well-being, mild euphoria, relaxation, tranquility, and a heightened state of awareness.
<u>Nonuse</u>	Never having tried a drug.
<u>Past Month</u>	Use of a drug during the past 30 days prior to responding to the questionnaire.
<u>Past Year</u>	Use of a drug during the year prior to responding to the questionnaire.
<u>Percent/ Percentage</u>	A given part or amount in every hundred, e.g., 20% means 20 out of every 100 cases. Percents are reported to the nearest tenth for the data in this study.
<u>Prevalence</u>	The number of cases existing in a population at a given time.
<u>Stimulant</u>	A major classification of drugs that stimulate the central nervous system and excite functional activity in the body, producing an elevation of mood (euphoria), a state of

wakefulness, increased mental activity, energy, alertness and tension, and suppressing appetite.

Tranquillizers

A general term for a varied and complex class of drugs that act to depress the central nervous system, relieving anxiety and tension. The tranquilizers of interest for this study are those generally prescribed as sedatives to reduce anxiety and tension. Some of these drugs, such as barbiturates, produce euphoria or other pleasant effects, and are thus sometimes used nonmedically.

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APPENDICIES

Appendix 1

Student Survey

Anchorage

Barrow

Bethel

Cordova

Fairbanks

Juneau

Kotzebue

The Center for Alcohol and Addiction Studies

University of Alaska, Anchorage

Confidential Student Questionnaire

Dear Student:

The purpose of this study is to help us to understand better your feelings and experiences with respect to alcohol and other drugs. About 3,000 students across Alaska will take part in this study. Your answers will be kept absolutely confidential. There is no way to identify any student who responds. We do not ask your name - do not write it anywhere on the questionnaire. Your participation is voluntary. We need your help, and hope that you will contribute to the success of this study.

Thank you for your cooperation.

Directions

This is not a test and you are not timed on any section or group of questions. Please read carefully all the directions for each question. It is important that you follow the order of questions within each section. If you do not understand or cannot read a question raise your hand and someone will assist you.

When you have finished the questionnaire put it in the envelope that has been provided by the monitor. No one at the school will see or read your answers. The envelope will be sealed after the last questionnaire is completed. All the envelopes will be immediately taken to the University to be coded and entered into the computer. All questionnaires will be destroyed after the computer file has been set up.

Part 1. Background Information

1. I am

- Female
 Male

2. My ethnic background is? (Please check the correct one.)

- Alaska Native Hispanic
 American Indian White
 Asian or Pacific Islander Other: Which _____
 Black

3. How old were you as of your last birthday? _____

4. What grade are you in? (Please check the correct one.)

- 6th 7th 8th 9th 10th 11th 12th

5. Have you ever taken part in an alcohol or drug education/prevention program in one of your classes?

- No (Go to #7)
 Yes (continue)

6. At which grade did you take part? (Check all that apply)

- 5th grade or below 9th grade
 6th grade 10th grade
 7th grade 11th grade
 8th grade 12th grade

7. What grades do you usually get? (Check the one that applies to you for each column.)

During this school year

During the year before

- | | |
|---|---|
| <input type="checkbox"/> Mostly A's | <input type="checkbox"/> Mostly A's |
| <input type="checkbox"/> Mostly A's and B's | <input type="checkbox"/> Mostly A's and B's |
| <input type="checkbox"/> Mostly B's | <input type="checkbox"/> Mostly B's |
| <input type="checkbox"/> Mostly B's and C's | <input type="checkbox"/> Mostly B's and C's |
| <input type="checkbox"/> Mostly C's | <input type="checkbox"/> Mostly C's |
| <input type="checkbox"/> Mostly C's and D's | <input type="checkbox"/> Mostly C's and D's |
| <input type="checkbox"/> Mostly D's and F's | <input type="checkbox"/> Mostly D's and F's |

8. How many years have you lived in this community? _____

Part 2. This set of questions asks about your experiences with recreational drugs used to get high or to feel good.

Section 1. Marijuana

Marijuana, which is sometimes called "grass," "pot," "weed," "smoke," "bud," "Mary Jane," or "joint," is a substance that is usually smoked.

9. Have you ever had a chance to try marijuana? No Yes

10. Have you ever tried marijuana?

- No (Go to Section 2)
 Yes (Continue)

11. How old were you when you first tried it? _____

12. Have you ever been high or stoned on marijuana to the point where you were pretty sure that you had experienced its effect?

- I never got high Have gotten high more than once
 Have gotten high once I get high almost every time I use it

13. How many different times have you used marijuana?

	No <u>times</u>	1-2 <u>times</u>	3-5 <u>times</u>	6-9 <u>times</u>	10-19 <u>times</u>	20-39 <u>times</u>	40+ <u>times</u>
In your lifetime	—	—	—	—	—	—	—
During the last 12 months	—	—	—	—	—	—	—
During the last 30 days	—	—	—	—	—	—	—

Section 2. Cocaine.

Cocaine, which is called "coke," "toot," "blow," or "snow," or other names, is a white powdery substance that is usually sniffed or smoked.

14. Have you ever had a chance to try cocaine? No Yes

15. Have you ever tried cocaine?

No (Go to Section 3)

Yes (Continue)

16. How did you use it? (Check all the apply to you.)

I have sniffed it

I have smoked it

I have injected it (shot it up)

I have used it in freebase form

17. How old were you when you first tried it? _____

18. Have you ever been high on cocaine to the point where you were pretty sure that you had experienced its effect?

I never got high

Have gotten high more than once

Have gotten high once

I get high almost every time I use it

19. How many different times have you used cocaine?

	No <u>times</u>	1-2 <u>times</u>	3-5 <u>times</u>	6-9 <u>times</u>	10-19 <u>times</u>	20-39 <u>times</u>	40+ <u>times</u>
In your lifetime	—	—	—	—	—	—	—
During the last 12 months	—	—	—	—	—	—	—
During the last 30 days	—	—	—	—	—	—	—

Section 3. Crack

Another type of cocaine is called "crack." This form of cocaine looks like a piece of rock or soap, and is smoked.

20. Have you ever had a chance to try crack? No Yes

21. Have you ever tried crack?

No (Go to Section 4)

Yes (Continue)

22. How old were you when you first tried it? _____

23. Have you ever been high on crack to the point where you were pretty sure that you had experienced its effect?

I never got high

Have gotten high once

Have gotten high more than one

I got high almost every time I use it

24. How many different times have you used crack?

	No <u>times</u>	1-2 <u>times</u>	3-5 <u>times</u>	6-9 <u>times</u>	10-19 <u>times</u>	20-39 <u>times</u>	40+ <u>times</u>
In your lifetime	—	—	—	—	—	—	—
During the last 12 months	—	—	—	—	—	—	—
During the last 30 days	—	—	—	—	—	—	—

Section 4. Stimulants ("Uppers")

Stimulants or amphetamine drugs, known as "uppers," "speed," "crystal," "bennies," "dexies," "pep pills," "crosstabs," "crossroads," and "crisscross," among other names, are used to make one feel more alert, energetic, or to obtain a high. They are usually taken in pill form.

25. Have you ever had a chance to try stimulants? No Yes

26. Have you ever tried stimulants?

No (Go to Section 5)

Yes (Continue)

27. How old were you when you first tried any? _____

28. Have you ever been high on a stimulant to the point where you were pretty sure that you had experienced its effect?

I never got high

Have gotten high more than once

Have gotten high once

I get high almost every time I use it

29. How many different times have you used stimulants?

	No <u>times</u>	1-2 <u>times</u>	3-5 <u>times</u>	6-9 <u>times</u>	10-19 <u>times</u>	20-39 <u>times</u>	40+ <u>times</u>
In your lifetime	—	—	—	—	—	—	—
During the last 12 months	—	—	—	—	—	—	—
During the last 30 days	—	—	—	—	—	—	—

Section 5. Hallucinogens

Hallucinogens, which are also called psychedelics, consist of such substances as LSD ("Acid"), Mescaline, and PCP, among other substances. Some of the slang names for hallucinogens are "mushrooms," "ecstasy," or "angel dust," "window pane," and "blotter acid." These substances are used to experience hallucinations, or to alter how things are seen, change one's mood, feelings, or level of awareness.

30. Have you ever had a chance to try hallucinogens? No Yes

31. Have you ever tried hallucinogens?

No (Go to Section 6)

Yes (Continue)

32. How old were you when you first tried any? _____

33. Have you ever been high on an hallucinogen to the point where you were pretty sure that you had experienced its effect?

I never got high

Have gotten high more than once

Have gotten high once

I get high almost every time I use it

34. How many different times have you used hallucinogens?

	No <u>times</u>	1-2 <u>times</u>	3-5 <u>times</u>	6-9 <u>times</u>	10-19 <u>times</u>	20-39 <u>times</u>	40+ <u>times</u>
In your lifetime	—	—	—	—	—	—	—
During the last 12 months	—	—	—	—	—	—	—
During the last 30 days	—	—	—	—	—	—	—

Section 6. Depressants ("Downers")

Depressant or "downer" type drugs, known as barbiturates, one of which is called Quaalude, are chemical substances used to calm oneself down or to get a high, much like using alcohol. Such drugs are usually taken in pill form, and are called "barbs," "blues" or "blue devils," "yellow jackets," "purple hearts," "soapers," or "ludes."

35. Have you ever had a chance to try depressants? No Yes

36. Have you ever tried depressants?

No (Go to Section 7)

Yes (Continue)

37. How old were you when you first tried any? _____

38. Have you ever been high on a depressant to the point where you were pretty sure that you had experienced its effect?

I never got high

Have gotten high more than once

Have gotten high once

I get high almost every time I use it

39. How many different times have you used depressants?

	No times	1-2 times	3-5 times	6-9 times	10-19 times	20-39 times	40+ times
In your lifetime	—	—	—	—	—	—	—
During the last 12 months	—	—	—	—	—	—	—
During the last 30 days	—	—	—	—	—	—	—

Section 7. Heroin

Heroin, which is sometimes called "H," "horse," "junk," "Mexican brown," or "smack," can be a white or brownish powdery substance that can be injected (shot up), sniffed, or smoked.

40. Have you ever had a chance to try heroin? No Yes

41. Have you ever tried heroin?

No (Go to Section 8)

Yes (Continue)

42. How old were you when you first tried it? _____

43. Have you ever been high on heroin to the point where you were pretty sure that you had experienced its effect?

I never got high

Have gotten high more than once

Have gotten high once

I get high almost every time I use it

44. How many different times have you used heroin?

	No times	1-2 times	3-5 times	6-9 times	10-19 times	20-39 times	40+ times
In your lifetime	—	—	—	—	—	—	—
During the last 12 months	—	—	—	—	—	—	—
During the last 30 days	—	—	—	—	—	—	—

Section 8. Inhalants

Inhalants are chemical substances, such as gasoline, kerosene, aerosol sprays, paint, glue, and other chemicals, or drugs such as nitrous oxide or amyl nitrate, that are sniffed or inhaled to induce a high.

45. Have you ever had a chance to try inhalants? No Yes

46. Have you ever tried any inhalants?

No (Go to Section 9)

Yes (Continue)

47. How old were you when you first tried any? _____

48. Have you ever been high on an inhalant to the point where you were pretty sure that you had experienced its effect?

- Not sure I ever got high Have gotten high more than once
 Have gotten high once I get high almost every time I use it

49. How many different times have you used inhalants?

	No	1-2	3-5	6-9	10-19	20-39	40+
	<u>times</u>	<u>times</u>	<u>times</u>	<u>times</u>	<u>times</u>	<u>times</u>	<u>times</u>
In your lifetime	—	—	—	—	—	—	—
During the last 12 months	—	—	—	—	—	—	—
During the last 30 days	—	—	—	—	—	—	—

Section 9. Tranquilizers

Tranquilizers are substances used to calm oneself, to relax or to get high. One such drug is Valium.

50. Have you ever had a chance to try tranquilizers? No Yes

51. Have you ever tried any tranquilizers?

- No (Go to Part 3)
 Yes (Continue)

52. How old were you when you first tried any? _____

53. Have you ever been high on a tranquilizer to the point where you were pretty sure that you had experienced its effect?

- I never got high Have gotten high more than once
 Have gotten high once I get high almost every time I use it

54. How many different times have you used tranquilizers?

	No	1-2	3-5	6-9	10-19	20-39	40+
	<u>times</u>	<u>times</u>	<u>times</u>	<u>times</u>	<u>times</u>	<u>times</u>	<u>times</u>
In your lifetime	—	—	—	—	—	—	—
During the last 12 months	—	—	—	—	—	—	—
During the last 30 days	—	—	—	—	—	—	—

Part 3.

If you have never tried a drug answer #54. If you have tried a drug, skip to #55.

54. If you have never tried a drug, was it because of any of the following?
 (Check the column that best applies to you for each item.)

	Very True of me	Often True of me	Sometimes True for of me	Seldom True of me	Not True of me
Fear of damage to my mind	—	—	—	—	—
Moral reasons	—	—	—	—	—
Knowing friends who had a bad trip	—	—	—	—	—
Fear of having a bad experience	—	—	—	—	—
No opportunity to try a drug	—	—	—	—	—
Disappoint my parents	—	—	—	—	—
Pressure from friends	—	—	—	—	—
May cause addiction	—	—	—	—	—
It is illegal	—	—	—	—	—
Not important for me to try	—	—	—	—	—
Because of something I learned in school.	—	—	—	—	—

(Skip to #56)

55. Have any of the following ever happened to you as a result of your experience with any type of drug?
(Check all that apply to you.)

	<u>Never</u>	<u>Once</u>	<u>2-3 Times</u>	<u>4 or more Times</u>
Gotten into trouble with your teachers or principal.	—	—	—	—
Had it get in the way of school work.	—	—	—	—
Gotten you in trouble with your friends.	—	—	—	—
Gotten you in trouble with the police.	—	—	—	—
Had a bad trip.	—	—	—	—
Resulted in an accident or injury to you or others.	—	—	—	—
Been suspended from school.	—	—	—	—

(Continue below)

56. Do you think the use of any of the substances listed below has increased in your school during the past year? (Please check all the ones you believe have gone up.)

- | | | |
|------------------------------------|--|--------------------------------------|
| <input type="checkbox"/> Alcohol | <input type="checkbox"/> Cocaine | <input type="checkbox"/> Stimulants |
| <input type="checkbox"/> Tobacco | <input type="checkbox"/> Crack | <input type="checkbox"/> Depressants |
| <input type="checkbox"/> Marijuana | <input type="checkbox"/> Hallucinogens | <input type="checkbox"/> Inhalants |
| <input type="checkbox"/> Heroin | <input type="checkbox"/> Tranquilizers | |

57. Do you think the use of any of the substances listed below has decreased in your school during the past year? (Please check all the ones you believe have gone down.)

- | | | |
|------------------------------------|--|--------------------------------------|
| <input type="checkbox"/> Alcohol | <input type="checkbox"/> Cocaine | <input type="checkbox"/> Stimulants |
| <input type="checkbox"/> Tobacco | <input type="checkbox"/> Crack | <input type="checkbox"/> Depressants |
| <input type="checkbox"/> Marijuana | <input type="checkbox"/> Hallucinogens | <input type="checkbox"/> Inhalants |
| <input type="checkbox"/> Heroin | <input type="checkbox"/> Tranquilizers | |

58. About how many of your friends have tried: (Check the appropriate place)

	<u>None</u>	<u>1 or 2</u>	<u>Several</u>	<u>Most</u>	<u>All</u>	<u>Don't Know</u>
Marijuana	—	—	—	—	—	—
Cocaine	—	—	—	—	—	—
Crack	—	—	—	—	—	—
Stimulants	—	—	—	—	—	—
Hallucinogens	—	—	—	—	—	—
Depressants	—	—	—	—	—	—
Heroin	—	—	—	—	—	—
Inhalants	—	—	—	—	—	—
Tranquilizers	—	—	—	—	—	—
Alcohol	—	—	—	—	—	—
Cigarettes	—	—	—	—	—	—
Smokeless tobacco	—	—	—	—	—	—

59. About how many of your friends use: (Check the appropriate place)

	<u>None</u>	<u>1 or 2</u>	<u>Several</u>	<u>Most</u>	<u>All</u>	<u>Don't Know</u>
Marijuana	—	—	—	—	—	—
Cocaine	—	—	—	—	—	—
Crack	—	—	—	—	—	—
Stimulants	—	—	—	—	—	—
Hallucinogens	—	—	—	—	—	—
Depressants	—	—	—	—	—	—
Heroin	—	—	—	—	—	—
Inhalants	—	—	—	—	—	—
Tranquilizers	—	—	—	—	—	—
Alcohol	—	—	—	—	—	—
Cigarettes	—	—	—	—	—	—
Smokeless tobacco	—	—	—	—	—	—

Part 4. The questions in this part ask about your experiences with beer, wine, and liquor.

60. Have you ever had a drink of wine, beer, or liquor - not just a sip or taste - with friends outside of your home?

- No (Go to Part 5)
- Yes (Continue)

61. Have you had a drink of wine, beer, or liquor - not just a sip or taste - with friends outside of your home during the past year?

- No
- Yes

62. How old were you when you had your first drink (not just a sip or taste) with friends at a party or some other kind of get together outside of your home? _____

63. How many times did you drink beer, wine, or liquor during the past 30 days?

- No time
- 1 time
- 2-3 times
- 1-2 times a week
- 3-4 times a week
- 5-6 times a week
- Once a day
- More than once a day

64. Think of all the times when you had beer, wine, or liquor during the past 30 days. How many drinks do you usually have?

(Think of one can of beer, a glass of wine, or a mixed drink as equal to one drink.)

- I did not drink during this time
- 1 drink
- 2 drinks
- 3-5 drinks
- 6-10 drinks
- 11 or more drinks

65. During the past year, about how many times did you drink just to feel a little high or light-headed?

- None
- 2-3 times
- 6-10 times
- Twice a month
- One time
- 4-5 times
- Once a month
- Once a week or more

66. During the past year, about how many times have you gotten drunk or very, very high?

- None
- 2-3 times
- 6-10 times
- Twice a month
- One time
- 4-5 times
- Once a month
- Once a week or more

67. During the past year, about how many times have you gotten sick (nauseas or vomiting) as a result of drinking?

- None
- 2-3 times
- 6-10 times
- Twice a month
- One time
- 4-5 times
- Once a month
- Once a week or more

68. Have you ever had any of the following happen to you as a result of drinking?

(Place a check where it applies to you for each item.)

	<u>Never</u>	<u>Once</u>	<u>2-3 Times</u>	<u>4 or more Times</u>
Got into trouble with your teachers or principal.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Had it get in the way of school work.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Got you in trouble with your friends.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Got you in trouble with the police.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Got you in a fight.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Resulted in an accident or injury to you or others.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have driven when drinking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

69. How many of your close friends drink alcoholic beverages at least once a week?

- Most of my friends don't drink at all
- None of my friends drink at least once a week
- Some of my friends drink at least once a week
- Most of my friends drink at least once a week
- All of my friends drink at least once a week

Part 5. Tobacco

70. Have you ever tried smoking cigarettes?

- No (Go to #78)
- Yes (Continue)

71. Have you smoked more than two or three times?

- No
- Yes

72. How old were you when you first tried smoking cigarettes? _____

73. How many times during the past 30 days have you smoked cigarettes?

- None (Go to #77)
- 1 time
- 2-3 times
- 1-2 times a week
- 3-4 times a week
- 5-6 times a week
- Once a day
- Two or three times a day
- More than four times a day

74. Think of all the times when you have smoked during the past 30 days. About how many cigarettes did you smoke during a day?

- 1-5 cigarettes a day
- 6-10 cigarettes
- 11-15 cigarettes
- 16-20 cigarettes
- 21 or more cigarettes

75. Would you consider yourself:

- An occasional smoker (go to #79)
- A moderate smoker (Go to #76)
- A light smoker (Go #76)
- A heavy smoker (Go to #76)

76. How old were you when you became a light, moderate, or heavy smoker? _____

(Skip to #79)

77. If you have stopped smoking, was it for any of these reasons? (Check all that apply to you.)

- Just didn't feel a need to smoke anymore
 - Fear of damage to my body
 - Parents disapproved
 - Friends disapproved
 - Because of something I learned in school
 - Other: _____
- (Go to #79)

78. If you have never smoked, was it for any of the following reasons? (Check all that apply to you.)

- Just don't feel a need to smoke
 - Fear of damage to my body
 - Parents disapproved
 - Friends disapproved
 - Because of something I learned in school
 - Other: _____
- (Go to #79)

79. Have you ever tried chewing tobacco or smokeless tobacco (such as Skoll)?

No (Go to #85)

Yes

80. How old were you when you first tried smokeless tobacco? _____

81. How many times during the past month (30 days) have you used either chewing or smokeless tobacco?

(Check the columns that apply to you for both types of smokeless tobacco.)

	<u>Chewing Tobacco</u>	<u>Smokeless Tobacco</u>
None.....	<input type="checkbox"/>	<input type="checkbox"/> (Go to #84)
1 time.....	<input type="checkbox"/>	<input type="checkbox"/>
2-3 times.....	<input type="checkbox"/>	<input type="checkbox"/>
1-2 times a week...	<input type="checkbox"/>	<input type="checkbox"/>
3-4 times a week...	<input type="checkbox"/>	<input type="checkbox"/>
5-6 times a week...	<input type="checkbox"/>	<input type="checkbox"/>
Once a day.....	<input type="checkbox"/>	<input type="checkbox"/>
More than once a day.	<input type="checkbox"/>	<input type="checkbox"/>

82. Would you consider yourself:

An occasional user (Go to #84)

A moderate user (Go to #83)

A light user (Go to #83)

A heavy user (Go to #83)

83. How old were you when you became a light, moderate, or heavy smokeless or chewing tobacco user? _____

(Skip to Part 6)

84. If you have used smokeless or chewing tobacco but have now stopped, was it for any of these reasons?

(Check all that apply to you.)

Just didn't feel a need to use it anymore

Fear of damage to my body

Parents disapproved

Friends disapproved

Other: _____

85. If you have never used smokeless tobacco, was it for any of the following reasons? (Check all that apply to you.)

Just don't feel a need to use it

Friends disapproved

Parents disapproved

Fear of damage to my body

Because of something I learned in school

Other: _____

Please Continue on the Next Page

Part 6

Please answer the following questions, whether you have used drugs or not, concerning some different feelings or experiences that people have. Read each item and check the statement that best describes you. Answer every item.

	<u>Very</u> <u>True</u> <u>of me</u>	<u>Often</u> <u>True</u> <u>of me</u>	<u>Sometimes</u> <u>True</u> <u>of me</u>	<u>Seldom</u> <u>True</u> <u>of me</u>	<u>Not</u> <u>True</u> <u>of me</u>
I would enjoy being a famous person.	—	—	—	—	—
I don't really have fun at parties.	—	—	—	—	—
I often act without thinking.	—	—	—	—	—
I enjoy being alone.	—	—	—	—	—
I am pretty cautious.	—	—	—	—	—
I daydream about doing hard tasks.	—	—	—	—	—
I care what others think about me.	—	—	—	—	—
I do not give up easily on a problem.	—	—	—	—	—
I feel that I have a lot of control over my future. ...	—	—	—	—	—
I often wish I had more good friends.	—	—	—	—	—
My daydreams often cheer me up when I feel sad. ...	—	—	—	—	—
I almost never ask for help or advice.	—	—	—	—	—
Being successful is important to me.	—	—	—	—	—
I like to tell others how to do things.	—	—	—	—	—
I try not to take life very seriously.	—	—	—	—	—
When I want something - I want it now - not later. ...	—	—	—	—	—
I'm afraid I'm not very popular.	—	—	—	—	—
I am not interested in anything unless it is exciting. .	—	—	—	—	—
My feelings are easily hurt.	—	—	—	—	—
I sometimes question the reason why I do things. ...	—	—	—	—	—
Sometimes I take myself too seriously.	—	—	—	—	—
Being successful at what I do is important to me. ...	—	—	—	—	—
What others think of me is not important to me.	—	—	—	—	—
I like to feel free to come and go as I please.	—	—	—	—	—
I am not easily pressured by my friends.	—	—	—	—	—

This is the end of the questionnaire.

Thank you for filling it out.

Appendix 2
Student Survey
Nome

The Center for Alcohol and Addiction Studies
University of Alaska Anchorage
Confidential Student Questionnaire

Dear Student:

The purpose of this study is to help us to understand better your feelings and experiences with respect to alcohol and other drugs. In this survey use of drugs does not include prescription drugs or alcohol used in religious activities.

About 3,000 students across Alaska will take part in this study. Your answers will be kept absolutely confidential. There is no way to identify any student who responds. We do not ask your name - do not write it anywhere on the questionnaire. Your participation is voluntary. We need your help, and hope that you will contribute to the success of this study.

Thank you for your cooperation.

Directions

This is not a test, there are no right or wrong answers, and you are not timed on any section or group of questions. Please read all the directions for each question carefully, and follow the instructions for each item. It is important that you follow the order of questions within each section. If you do not understand or cannot read a question, raise your hand and someone will assist you.

When you have finished the questionnaire put it in the envelope that has been provided by the monitor. No one at the school will see or read your answers. The envelope will be sealed after the last questionnaire is completed. All the envelopes will be immediately taken to the University to be coded and entered into the computer. All questionnaires will be destroyed after the computer file has been set up.

Part 1. Background Information

1. I am

- Female.
 Male.

2. My ethnic background is: (Please check the correct one.)

- | | |
|--|--|
| <input type="checkbox"/> Alaska Native | <input type="checkbox"/> Spanish (Hispanic) |
| <input type="checkbox"/> American Indian | <input type="checkbox"/> White |
| <input type="checkbox"/> Asian or Pacific Islander | <input type="checkbox"/> Filipino |
| <input type="checkbox"/> Black | <input type="checkbox"/> Other: Which? _____ |

3. How old were you as of your last birthday? _____

4. What grade are you in? (Please check the correct one.)

- 6th 7th 8th 9th 10th 11th 12th

5. Have you ever taken part in an alcohol or drug education/prevention program in one of your classes?

- No (Go to #7.)
 Yes (continue.)

6. Which grade(s) did you take part in an alcohol or drug education/prevention program?

(Check all that apply.)

- | | |
|---|-------------------------------------|
| <input type="checkbox"/> 5th grade or below | <input type="checkbox"/> 9th grade |
| <input type="checkbox"/> 6th grade | <input type="checkbox"/> 10th grade |
| <input type="checkbox"/> 7th grade | <input type="checkbox"/> 11th grade |
| <input type="checkbox"/> 8th grade | <input type="checkbox"/> 12th grade |

7. What grades do you usually get? (Check only the one that applies to you in each of the two columns.)

During this school year

During the year before

- | | |
|---|---|
| <input type="checkbox"/> Mostly A's | <input type="checkbox"/> Mostly A's |
| <input type="checkbox"/> Mostly A's and B's | <input type="checkbox"/> Mostly A's and B's |
| <input type="checkbox"/> Mostly B's | <input type="checkbox"/> Mostly B's |
| <input type="checkbox"/> Mostly B's and C's | <input type="checkbox"/> Mostly B's and C's |
| <input type="checkbox"/> Mostly C's | <input type="checkbox"/> Mostly C's |
| <input type="checkbox"/> Mostly C's and D's | <input type="checkbox"/> Mostly C's and D's |
| <input type="checkbox"/> Mostly D's and F's | <input type="checkbox"/> Mostly D's and F's |

8. How many years have you lived in the municipality of Anchorage? (If you lived here, moved away, and returned, just count the most recent time.) _____

Part 2. What follows is a set of questions asking about your experiences with different kinds of mood altering drugs used to get high or to feel good. Do not report the use of drugs used under the direction of a physician or dentist. Please respond to each of the following sections.

Section 1. Marijuana

Marijuana, which is sometimes called "grass," "pot," "weed," "smoke," "bud," "Mary Jane," or "joint," is a substance that is usually smoked.

9. Have you ever had a chance to try marijuana? No Yes
10. Did you ever try marijuana?
 No (Go to Section 2.)
 Yes (Continue.)
11. How old were you when you first tried it? _____
12. Have you ever been high or stoned on marijuana to the point where you were pretty sure that you had experienced its effect?
 I never got high. I have gotten high more than once.
 I have gotten high once. I get high almost every time i use it.

13. How many different times have you used marijuana?

	No <u>times</u>	1-2 <u>times</u>	3-5 <u>times</u>	6-9 <u>times</u>	10-19 <u>times</u>	20-39 <u>times</u>	40+ <u>times</u>
Total times in your lifetime	_____	_____	_____	_____	_____	_____	_____
Use during the last 12 months	_____	_____	_____	_____	_____	_____	_____
Use during the last 30 days	_____	_____	_____	_____	_____	_____	_____

Section 2. Cocaine.

Cocaine, which is called "coke," "toot," "blow," or "snow," or other names, is a white powdery substance that is usually sniffed or smoked.

14. Have you ever had a chance to try cocaine? No Yes
15. Did you ever try cocaine?
 No (Go to Section 3.)
 Yes (Continue.)
16. How did you use it? (Check all the apply to you.)
 I have sniffed it.
 I have smoked it.
 I have injected it (shot it up).
 I have used it in freebase form.
17. How old were you when you first tried it? _____

18. Have you ever been high on cocaine to the point where you were pretty sure that you had experienced its effect?

- I never got high. I have gotten high more than once.
 I have gotten high once. I get high almost every time I use it

19. How many different times have you used cocaine?

	No times	1-2 times	3-5 times	6-9 times	10-19 times	20-39 times	40+ times
Total times in your lifetime	_____	_____	_____	_____	_____	_____	_____
Use during the last 12 months	_____	_____	_____	_____	_____	_____	_____
Use during the last 30 days	_____	_____	_____	_____	_____	_____	_____

Section 3. Crack

Another type of cocaine is called "crack." This form of cocaine looks like a piece of rock or soap, and is smoked.

20. Have you ever had a chance to try crack? No Yes

21. Did you ever try crack?

- No (Go to Section 4.)
 Yes (Continue.)

22. How old were you when you first tried it? _____

23. Have you ever been high on crack to the point where you were pretty sure that you had experienced its effect?

- I never got high.
 I have gotten high once.
 I have gotten high more than once.
 I get high almost every time I use it.

24. How many different times have you used crack?

	No times	1-2 times	3-5 times	6-9 times	10-19 times	20-39 times	40+ times
Total times in your lifetime	_____	_____	_____	_____	_____	_____	_____
Use during the last 12 months	_____	_____	_____	_____	_____	_____	_____
Use during the last 30 days	_____	_____	_____	_____	_____	_____	_____

Section 4. Stimulants ("Uppers")

Stimulants or amphetamine drugs, known as "uppers," "speed," "crystal," "bennies," "dexies," "pep pills," "crosstabs," "crossroads," and "crisscross," among other names, are used to make one feel more alert, energetic, or to obtain a high. They are usually taken in pill form.

25. Have you ever had a chance to try stimulants? No Yes

26. Did you ever try stimulants?

- No (Go to Section 5.)
 Yes (Continue.)

27. How old were you when you first tried any? _____

28. Have you ever been high on a stimulant to the point where you were pretty sure that you had experienced its effect?

- I never got high.
 I have gotten high once.
 I have gotten high more than once.
 I get high almost every time I use it.

29. How many different times have you used stimulants?

	No <u>times</u>	1-2 <u>times</u>	3-5 <u>times</u>	6-9 <u>times</u>	10-19 <u>times</u>	20-39 <u>times</u>	40+ <u>times</u>
Total times in your lifetime	_____	_____	_____	_____	_____	_____	_____
Use during the last 12 months	_____	_____	_____	_____	_____	_____	_____
Use during the last 30 days	_____	_____	_____	_____	_____	_____	_____

Section 5. Hallucinogens

Hallucinogens, which are also called psychedelics, consist of such substances as LSD ("Acid"), Mescaline, and PCP, among other substances. Some of the slang names for hallucinogens are "mushrooms," "ecstasy," or "angel dust," "window pane," and "blotter acid." These substances are used to experience hallucinations, or to alter how things are seen, change one's mood, feelings, or level of awareness.

30. Have you ever had a chance to try hallucinogens? No Yes

31. Did you ever try hallucinogens?

- No (Go to Section 6.)
 Yes (Continue.)

32. How old were you when you first tried any? _____

33. Have you ever been high on an hallucinogen to the point where you were pretty sure that you had experienced its effect?

- I never got high.
- I have gotten high once
- I have gotten high more than once.
- I get high almost every time I use it.

34. How many different times have you used hallucinogens?

	No times	1 - 2 times	3 - 5 times	6 - 9 times	10 - 19 times	20 - 39 times	40 + times
Total times in your lifetime	_____	_____	_____	_____	_____	_____	_____
Use during the last 12 months	_____	_____	_____	_____	_____	_____	_____
Use during the last 30 days	_____	_____	_____	_____	_____	_____	_____

Section 6. Depressants ("Downers")

Depressant or "downer" type drugs, known as barbiturates, one of which is called Quaalude, are chemical substances used to calm oneself down or to get a high, much like using alcohol. Such drugs are usually taken in pill form, and are called "barbs," "blues" or "blue devils," "yellow jackets," "purple hearts," "soapers," or "ludes."

35. Have you ever had a chance to try depressants? No Yes

36. Did you ever try depressants?

- No (Go to Section 7.)
- Yes (Continue.)

37. How old were you when you first tried any? _____

38. Have you ever been high on a depressant to the point where you were pretty sure that you had experienced its effect?

- I never got high.
- I have gotten high once
- I have gotten high more than once.
- I get high almost every time I use it.

39. How many different times have you used depressants?

	No times	1 - 2 times	3 - 5 times	6 - 9 times	10 - 19 times	20 - 39 times	40 + times
Total times in your lifetime	_____	_____	_____	_____	_____	_____	_____
Use during the last 12 months	_____	_____	_____	_____	_____	_____	_____
Use during the last 30 days	_____	_____	_____	_____	_____	_____	_____

Section 7. Heroin

Heroin, which is sometimes called "H," "horse," "junk," "Mexican brown," or "smack," can be a white or brownish powdery substance that can be injected (shot up), sniffed, or smoked.

40. Have you ever had a chance to try heroin? No Yes

41. Did you ever try heroin?

- No (Go to Section 8.)
- Yes (Continue.)

42. How old were you when you first tried it? _____

43. Have you ever been high on heroin to the point where you were pretty sure that you had experienced its effect?

- I never got high.
- I have gotten high once.
- I have gotten high more than once.
- I get high almost every time I use it.

44. How many different times have you used heroin?

	No times	1 - 2 times	3 - 5 times	6 - 9 times	10 - 19 times	20 - 39 times	40 + times
Total times in your lifetime	_____	_____	_____	_____	_____	_____	_____
Use during the last 12 months	_____	_____	_____	_____	_____	_____	_____
Use during the last 30 days	_____	_____	_____	_____	_____	_____	_____

Section 8. Inhalants

Inhalants are chemical substances, such as gasoline, kerosene, aerosol sprays, paint, glue, and other chemicals, or drugs such as nitrous oxide or amyl nitrate, that are sniffed or inhaled to induce a high.

45. Have you ever had a chance to try inhalants? No Yes

46. Did you ever try inhalants?

- No(Go to Section 9.)
- Yes(Continue.)

47. How old were you when you first tried any? _____

48. Have you ever been high on an inhalant to the point where you were pretty sure that you had experienced its effect?

- I never got high.
- I have gotten high once.
- I have gotten high more than once.
- I get high almost every time I use it.

49. How many different times have you used inhalants?

	<u>No</u> <u>times</u>	<u>1 - 2</u> <u>times</u>	<u>3 - 5</u> <u>times</u>	<u>6 - 9</u> <u>times</u>	<u>10 - 19</u> <u>times</u>	<u>20 - 39</u> <u>times</u>	<u>40 +</u> <u>times</u>
Total times in your lifetime	_____	_____	_____	_____	_____	_____	_____
Use during the last 12 months	_____	_____	_____	_____	_____	_____	_____
Use during the last 30 days	_____	_____	_____	_____	_____	_____	_____

Section 9. Tranquillizers

Tranquillizers are substances used to calm oneself, to relax or to get high. One such drug is Valium.

50. Have you ever had a chance to try tranquillizers? _____ No _____ Yes

51. Did you ever try tranquillizers?

_____ No (Go to Part 3.)
 _____ Yes (Continue.)

52. How old were you when you first tried any? _____

53. Have you ever been high on a tranquillizer to the point where you were pretty sure that you had experienced its effect?

_____ I never got high. _____ I have gotten high more than once.
 _____ I have gotten high once. _____ I get high almost every time I use it.

54a. How many different times have you used tranquillizers?

	<u>No</u> <u>times</u>	<u>1 - 2</u> <u>times</u>	<u>3 - 5</u> <u>times</u>	<u>6 - 9</u> <u>times</u>	<u>10 - 19</u> <u>times</u>	<u>20 - 39</u> <u>times</u>	<u>40 +</u> <u>times</u>
Total times in your lifetime	_____	_____	_____	_____	_____	_____	_____
Use during the last 12 months	_____	_____	_____	_____	_____	_____	_____
Use during the last 30 days	_____	_____	_____	_____	_____	_____	_____

Part 3.

If you HAVE NEVER TRIED A DRUG answer #54b. If you have ever tried a drug, go to #55.

54b. If you have never tried a drug, was it because of any of the following reasons? (Check only one in each column that best applies to you for each item.)

<u>Because of:</u>	<u>Very True of me</u>	<u>Often True of me</u>	<u>Sometimes True of me</u>	<u>Seldom True of me</u>	<u>Not True of me</u>
Fear of damage to my mind	_____	_____	_____	_____	_____
Moral reasons	_____	_____	_____	_____	_____
Knowing friends who had a bad trip	_____	_____	_____	_____	_____
Fear of having a bad experience	_____	_____	_____	_____	_____
No opportunity to try a drug	_____	_____	_____	_____	_____
Disappoint my parents	_____	_____	_____	_____	_____
Pressure from friends	_____	_____	_____	_____	_____
May cause addiction	_____	_____	_____	_____	_____
It is illegal	_____	_____	_____	_____	_____
Not important for me to try	_____	_____	_____	_____	_____
Because of something I learned in school	_____	_____	_____	_____	_____

(Go to #56.)

55. Have any of the following ever happened to you as a result of your experience with any type of drug? (Check all that apply to you.)

	<u>Never</u>	<u>Once</u>	<u>2 - 3 times</u>	<u>4 or more times</u>
Gotten into trouble with your teachers or principal.	_____	_____	_____	_____
Had it get in the way of school work	_____	_____	_____	_____
Gotten you in trouble with your friends	_____	_____	_____	_____
Gotten you in trouble with the police	_____	_____	_____	_____
Had a bad trip	_____	_____	_____	_____
Resulted in an accident or injury to you or others.	_____	_____	_____	_____
Been suspended from school	_____	_____	_____	_____
Been addicted	_____	_____	_____	_____

56. Do you think the use of any of the drugs listed below has INCREASED among students who attend your school during the past year? (Please check all the ones you believe have gone up.)

- | | | |
|-----------------|---------------------|-------------------|
| _____ Alcohol | _____ Cocaine | _____ Stimulants |
| _____ Tobacco | _____ Crack | _____ Depressants |
| _____ Marijuana | _____ Hallucinogens | _____ Inhalants |
| _____ Heroin | _____ Tranquilizers | _____ Don't know |

57. Do you think the use of any of the drugs listed below has DECREASED among students who attend your school during the past year? (Please check all the ones you believe have gone down.)

- | | | |
|-----------------|---------------------|-------------------|
| _____ Alcohol | _____ Cocaine | _____ Stimulants |
| _____ Tobacco | _____ Crack | _____ Depressants |
| _____ Marijuana | _____ Hallucinogens | _____ Inhalants |
| _____ Heroin | _____ Tranquilizers | _____ Don't know |

58. How many of your FRIENDS do you think have tried: (Check only one blank for each item.)

	<u>None</u>	<u>1 or 2</u>	<u>Several</u>	<u>Most</u>	<u>All</u>	<u>Don't Know</u>
Marijuana	_____	_____	_____	_____	_____	_____
Cocaine	_____	_____	_____	_____	_____	_____
Crack	_____	_____	_____	_____	_____	_____
Stimulants	_____	_____	_____	_____	_____	_____
Hallucinogens	_____	_____	_____	_____	_____	_____
Depressants	_____	_____	_____	_____	_____	_____
Heroin	_____	_____	_____	_____	_____	_____
Inhalants	_____	_____	_____	_____	_____	_____
Tranquillizers	_____	_____	_____	_____	_____	_____
Alcohol	_____	_____	_____	_____	_____	_____
Cigarettes	_____	_____	_____	_____	_____	_____
Smokeless tobacco	_____	_____	_____	_____	_____	_____

59. How many of your FRIENDS do you think use: (Check only one blank for each item.)

	<u>None</u>	<u>1 or 2</u>	<u>Several</u>	<u>Most</u>	<u>All</u>	<u>Don't Know</u>
Marijuana	_____	_____	_____	_____	_____	_____
Cocaine	_____	_____	_____	_____	_____	_____
Crack	_____	_____	_____	_____	_____	_____
Stimulants	_____	_____	_____	_____	_____	_____
Hallucinogens	_____	_____	_____	_____	_____	_____
Depressants	_____	_____	_____	_____	_____	_____
Heroin	_____	_____	_____	_____	_____	_____
Inhalants	_____	_____	_____	_____	_____	_____
Tranquillizers	_____	_____	_____	_____	_____	_____
Alcohol	_____	_____	_____	_____	_____	_____
Cigarettes	_____	_____	_____	_____	_____	_____
Smokeless tobacco	_____	_____	_____	_____	_____	_____

Part 4. The questions in this part ask about your experiences with other mood altering drugs such as beer, wine, and liquor.

60. Have you ever had a drink of wine, beer, or liquor - not just a sip or taste - with friends outside of your home?

- _____ No (Go to Part 5.)
 _____ Yes (Continue.)

61. Have you had a drink of wine, beer, or liquor - not just a sip or taste - with friends outside of your home during the past year?

- _____ No
 _____ Yes

62. How old were you when you had your first drink (not just a sip or taste) with friends at a party or some other kind of get together outside of your home? _____

63. During the past 30 days, how many times did you drink beer, wine, or liquor?

- None
- 1 time
- 2-3 times
- 1-2 times a week
- 3-4 times a week
- 5-6 times a week
- Once a day
- More than once a day

64. During the past 30 days, think of each time when you had beer, wine, or liquor. Each time you drink, how many drinks do you usually have? (Think of one can of beer, a glass of wine, or a mixed drink as equal to one drink.)

- I did not drink during this time
- 1 drink
- 2 drinks
- 3-5 drinks
- 6-10 drinks
- 11 or more drinks

65. During the past year, about how many times did you drink just to feel a little high or light-headed?

- | | | | |
|-----------------------------------|------------------------------------|---------------------------------------|--|
| <input type="checkbox"/> None | <input type="checkbox"/> 2-3 times | <input type="checkbox"/> 6-10 times | <input type="checkbox"/> Twice a month |
| <input type="checkbox"/> One time | <input type="checkbox"/> 4-5 times | <input type="checkbox"/> Once a month | <input type="checkbox"/> Once a week or more |

66. During the past year, about how many times have you gotten drunk or very, very high?

- | | | | |
|-----------------------------------|------------------------------------|---------------------------------------|--|
| <input type="checkbox"/> None | <input type="checkbox"/> 2-3 times | <input type="checkbox"/> 6-10 times | <input type="checkbox"/> Twice a month |
| <input type="checkbox"/> One time | <input type="checkbox"/> 4-5 times | <input type="checkbox"/> Once a month | <input type="checkbox"/> Once a week or more |

67. During the past year, about how many times have you gotten sick (nauseous or vomiting) as a result of drinking?

- | | | | |
|-----------------------------------|------------------------------------|---------------------------------------|--|
| <input type="checkbox"/> None | <input type="checkbox"/> 2-3 times | <input type="checkbox"/> 6-10 times | <input type="checkbox"/> Twice a month |
| <input type="checkbox"/> One time | <input type="checkbox"/> 4-5 times | <input type="checkbox"/> Once a month | <input type="checkbox"/> Once a week or more |

68. Have you ever had any of the following happen to you as a result of drinking?
 (Place a check where it applies to you for each item.)

	<u>Never</u>	<u>Once</u>	<u>2 - 3 times</u>	<u>4 or more times</u>
Gotten into trouble with your teachers or principal	_____	_____	_____	_____
Had it get in the way of school work	_____	_____	_____	_____
Gotten you in trouble with your friends	_____	_____	_____	_____
Gotten you in trouble with the police	_____	_____	_____	_____
Gotten you in a fight	_____	_____	_____	_____
Resulted in an accident or injury to you or others	_____	_____	_____	_____
Have driven when drinking	_____	_____	_____	_____

69. How many of your close friends drink alcoholic beverages at least once a week?

- _____ Most of my friends don't drink at all.
- _____ None of my friends drink at least once a week.
- _____ Some of my friends drink at least once a week.
- _____ Most of my friends drink at least once a week.
- _____ All of my friends drink at least once a week.

Part 5. Tobacco

70. Have you ever tried smoking cigarettes?

- _____ No (Go to #78.)
- _____ Yes (Continue.)

71. Have you smoked more than two or three times?

- _____ No
- _____ Yes

72. How old were you when you first tried smoking cigarettes? _____

73. During the past 30 days, how many times have you smoked cigarettes?

- _____ None (Go to #77)
- _____ 1 time
- _____ 2-3 times
- _____ 1-2 times a week
- _____ 3-4 times a week
- _____ 5-6 times a week
- _____ Once a day
- _____ Two or three times a day
- _____ More than four times a day

74. During the past 30 days, on the average, how many cigarettes have you smoked during a day?

- 1-5 cigarettes a day
- 6-10 cigarettes
- 11-15 cigarettes
- 16-20 cigarettes
- 21 or more cigarettes

75. Would you consider yourself:

- An occasional smoker (go to #79.)
- A light smoker (Go #76.)
- A moderate smoker (Go to #76.)
- A heavy smoker(Go to #76.)

76. How old were you when you became a light, moderate, or heavy smoker? _____

77. If you have stopped smoking, was it for any of these reasons? IF YOU HAVE NOT QUIT, GO TO #79. (Check all that apply to you.)

- Just didn't feel a need to smoke anymore
- Fear of damage to my body
- Parents disapproved
- Friends disapproved
- Because of something I learned in school
- Other:
(Go to #79.)

78. If you have never smoked, was it for any of the following reasons? (Check all that apply to you.)

- Just didn't feel a need to smoke anymore
- Fear of damage to my body
- Parents disapproved
- Friends disapproved
- Because of something I learned in school
- Other:
(Go to #79)

79. Have you ever tried chewing tobacco (such as Redman) or smokeless tobacco (such as Skoal)?

- No (Go to #86.)
- Yes

80. How old were you when you first tried chewing or smokeless tobacco? _____

81. How many times during the past month (30 days), have you used chewing tobacco?

- None
- 1 time
- 2-3 times
- 1-2 times a week
- 3-4 times a week
- 5-6 times a week
- Once a day
- Two or three times a day
- More than four times a day

82. How many times during the past month (30 days), have you used smokeless tobacco?

- None
- 1 time
- 2-3 times
- 1-2 times a week
- 3-4 times a week
- 5-6 times a week
- Once a day
- Two or three times a day
- More than four times a day

83. Would you consider yourself:

- An occasional user (Go to #85.)
- A moderate user (Go to #84.)
- A light user (Go to #84.)
- A heavy user (Go to #84.)

84. How old were you when you became a light, moderate, or heavy smokeless or chewing tobacco user? _____

85. If you have used smokeless or chewing tobacco but have now stopped, was it for any of these reasons? **IF YOU HAVE NOT QUIT SKIP TO PART 6.**
(Check all that apply to you.)

- Just didn't feel a need to use it anymore
- Fear of damage to my body
- Parents disapproved
- Friends disapproved
- Other: _____

86. If you have never used chewing or smokeless tobacco, was it for any of the following reasons? (Check all that apply to you.)

- Just don't feel a need to use it
- Friends disapproved
- Parents disapproved
- Fear of damage to my body
- Because of something I learned in school
- Other: _____

Part 6

Please answer the following questions whether you have used drugs or not concerning some different feelings or experiences that people have. Read each item and check the statement that best describes you. Answer every item.

<u>Because of:</u>	<u>Very True of me</u>	<u>Often True of me</u>	<u>Sometimes True of me</u>	<u>Seldom True of me</u>	<u>Not True of me</u>
I would enjoy being a famous person.	_____	_____	_____	_____	_____
I don't really have fun at parties.	_____	_____	_____	_____	_____
I often act without thinking.	_____	_____	_____	_____	_____
I enjoy being alone.	_____	_____	_____	_____	_____
I am pretty cautious.	_____	_____	_____	_____	_____
I daydream about doing hard tasks.	_____	_____	_____	_____	_____
I care what others think about me.	_____	_____	_____	_____	_____
I <u>do not</u> give up easily on a problem.	_____	_____	_____	_____	_____
I feel that I have a lot of control over my future	_____	_____	_____	_____	_____
I often wish I had more good friends.	_____	_____	_____	_____	_____
My daydreams often cheer me up when i feel sad.	_____	_____	_____	_____	_____
I <u>almost never</u> ask for help or advice.	_____	_____	_____	_____	_____
Being successful is important to me.	_____	_____	_____	_____	_____
I like to tell others how to do things.	_____	_____	_____	_____	_____
I try <u>not to</u> take life very seriously.	_____	_____	_____	_____	_____
When I want something - I want it now - not later.	_____	_____	_____	_____	_____
I'm afraid I'm <u>not</u> very popular.	_____	_____	_____	_____	_____
I <u>am not</u> interested in anything unless it is exciting.	_____	_____	_____	_____	_____
My feelings are easily hurt.	_____	_____	_____	_____	_____
I sometimes question the reason why I do things.	_____	_____	_____	_____	_____
Sometimes I take myself too seriously.	_____	_____	_____	_____	_____
Being successful at what I do is important to me.	_____	_____	_____	_____	_____
What others think of me <u>is not</u> important to me.	_____	_____	_____	_____	_____
I like to feel free to come and go as I please.	_____	_____	_____	_____	_____
I <u>am not</u> easily pressured by my friends.	_____	_____	_____	_____	_____

This is the end of the questionnaire.

Thank you for help.

Appendix 3
Student Survey
Sitka

CONFIDENTIAL

This questionnaire is part of a study being conducted to help us better understand the feelings and experiences of students as they relate to drugs.

Your participation is voluntary and you do not have to answer the questions unless you want to. However, we need your help and would like you to answer all of the questions.

If you don't understand or can't read a question, raise your hand and someone will help you.

This survey is strictly confidential. No one can know what you put down except you. Do not put your name anywhere on the questionnaire.

Thank you for your help.

Part I

1. During the last school year, did you have any drug/alcohol education lessons as part of any class? (Circle one number)

1. No 2. Yes 3. Don't Know

2. Do you believe that there is a need for drug/alcohol education programs in your school? (Circle one number)

1. No 2. Yes 3. Don't Know

Now we would like to ask you about alcohol products.

3. Have you ever drank wine, beer or some other alcoholic beverage on your own -- not just having a taste of someone else's drink?

1. No 2. Yes

A. If yes, do you drink alcoholic beverages now?

1. No 2. Yes

If yes, how often?

0. A few times a year

1. About once a month or less

2. About 2 or 3 times a month

3. About once a week

4. About 2-5 times a week

5. About once a day

6. More than once a day

SKIP TO
QUESTION 4

B. How many different times have you used alcohol in the past year?

1. Never

2. 1-2 times

3. 3-5 times

4. 6-9 times

5. 10-19 times

6. 20-39 times

7. 40+ times

C. How old were you when you first tried it? _____

D. When was the last time you tried it?

_____ More than a year ago

_____ Months ago

_____ Weeks ago

_____ This week

E. The following questions are about some things which may not have happened to you. Please circle whether each statement is true or false for you.

I have missed school because of alcohol use. T F

I have had problems in school because of alcohol use. T F

My grades have been affected because of the use of alcohol. T F

I have had problems outside of school because of alcohol use. T F

I have never had any kind of problem at school because of alcohol use. T F

4. If you have never tried or have stopped using alcoholic beverages, was it for any of the following reasons? Please circle either yes or no for each item.

1. May hurt by body.

1. No 2. Yes

2. May hurt my mind.

1. No 2. Yes

3. May cause addiction.

1. No 2. Yes

4. It is illegal.

1. No 2. Yes

5. Friends disapprove.

1. No 2. Yes

6. Not important for me to try it.

1. No 2. Yes

7. Never had the chance.

1. No 2. Yes

8. May affect my participation in sports.

1. No 2. Yes

9. Other: _____

5. If you wanted to try using a drug other than alcohol or tobacco, how easy or difficult would it be for you to get it? (Circle one number)

1. Impossible
2. Difficult
3. Fairly easy
4. Very easy

Now we would like to ask you about some drugs that are usually used for non-medical reasons, such as marijuana.

6. Marijuana is sometimes called grass or pot, and hashish is sometimes referred to as hash. Have you ever been offered this drug?

1. No 2. Yes _____

If yes, did you try it?

1. No 2. Yes

If yes, how old were you when you first tried it?

When was the last time you tried it?

_____ more than a year ago?

_____ months ago

_____ weeks ago

7. How about psychedelics like LSD, mescaline, psilocybin, MDA, or STP and that sort of thing? Have you ever been offered any of these drugs?

1. No 2. Yes _____

If yes, did you try it?

1. No 2. Yes

If yes, how old were you when you first tried it?

When was the last time you tried it?

_____ more than a year ago?

_____ months ago

_____ weeks ago

8. Have you ever been offered cocaine (or crack) ?

1. No 2. Yes _____

If yes, did you try it?

1. No 2. Yes

If yes, how old were you when you first tried it?

When was the last time you tried it?

_____ more than a
_____ year ago?
_____ months ago
_____ weeks ago

9. Have you ever been offered heroin (or smack) ?

1. No 2. Yes _____

If yes, did you try it?

1. No 2. Yes

If yes, how old were you when you first tried it?

When was the last time you tried it?

_____ more than a
_____ year ago?
_____ months ago
_____ weeks ago

10. Have you ever been offered an inhalant - by that we mean drugs and other substances people sniff or inhale for the effect - things like glue, aerosol sprays, ether, gasoline, or that sort of thing?

1. No 2. Yes _____

If yes, did you try it?

1. No 2. Yes

If yes, how old were you when you first tried it?

When was the last time you tried it?

_____ more than a
_____ year ago?
_____ months ago
_____ weeks ago

Now we would like to ask about some drugs which can be prescribed by doctors. However, we're only interested in times you used these drugs to get high, or just to feel good, or for other non-medical purposes. That is, when they were not given to you by a doctor.

11. Amphetamines and other stimulants are sometimes called speed or uppers. People can take them to lose weight, stay awake, or feel more energetic. Have you ever been offered this type of drug?

1. No 2. Yes _____

If yes, did you try it?

1. No 2. Yes

If yes, how old were you when you first tried it?

_____ When was the last time you tried it?

more than a _____ year ago?
_____ months ago
_____ weeks ago

12. How about sleeping pills, barbiturates and other sedatives which can be taken to help people sleep or calm down? People also use these to get high or for other non-medical purposes.

1. No 2. Yes _____

If yes, did you try it?

1. No 2. Yes

If yes, how old were you when you first tried it?

_____ When was the last time you tried it?

more than a _____ year ago?
_____ months ago
_____ weeks ago

13. How about tranquilizers and other downers which can be taken to help people relax?

1. No 2. Yes _____

If yes, did you try it?

1. No 2. Yes

If yes, how old were you when you first tried it?

_____ When was the last time you tried it?

more than a _____ year ago?
_____ months ago
_____ weeks ago

14. If you have used any of the chemicals listed below, mark and X in the box that indicates how many different times you used it during the past year.

	Not at all	About once a month or less	About 2 or 3 times a month	About once a week	About 2-5 times a week	About once a day	More than once a day
1. Marijuana (pot)							
2. Psychedelics (LSD, PCP)							
3. Cocaine (coke)							
4. Heroin (smack)							
5. Inhalants (gasoline, glue)							
6. Stimulants (uppers)							
7. Sedatives (downers)							
8. Tranquilizers (Valium, etc.)							

*NOW, IT YOU HAVE EVER USED ANY OF THE ABOVE DRUGS, PLEASE GO BACK AND CIRCLE THE FIRST ONE YOU EVER USED.

15. The following questions are about some things which may have or may not have happened to you. Please circle whether each statement is true or false for you.

I have missed school because of drug use. T F

I have had problems in school because of drug use. T F

My grades have been affected because of the use of drugs. T F

I have had problems outside of school because of drug use. T F

I have never had any kind of problem at school because of drug use. T F

16. If you have never tried or have stopped using marijuana, cocaine, or other chemicals, was it for any of the following reasons? Please circle either yes or not for each item.

1. May hurt by body.

1. No 2. Yes

2. May hurt my mind.

1. No 2. Yes

3. May cause addiction.

1. No 2. Yes

4. It is illegal.

1. No 2. Yes

5. Friends disapprove.

1. No 2. Yes

6. Not important for me to try it.

1. No 2. Yes

7. Never had the chance.

1. No 2. Yes

8. Other: _____

17. Now, we would like to ask a few general questions about you.

1. Your sex (please circle one number)

1. Female 2. Male

2. Age to nearest birthday?

3. Circle your grade in school.

Junior High

High School

6 7 8

9 10 11 12

THIS IS THE END OF THE QUESTIONNAIRE

THANK YOU FOR FILLING IT OUT

The Center for Alcohol and Addiction Studies

University of Alaska, Anchorage

Confidential Student Questionnaire

Dear Student:

The purpose of this study is to help us to understand better your feelings and experiences with respect to alcohol and other drugs. About 3,000 students across Alaska will take part in this study. Your answers will be kept absolutely confidential. There is no way to identify any student who responds. We do not ask your name - do not write it anywhere on the questionnaire. Your participation is voluntary. We need your help, and hope that you will contribute to the success of this study.

Thank you for your cooperation.

Directions

This is not a test and you are not timed on any section or group of questions. Please read carefully all the directions for each question. It is important that you follow the order of questions within each section. If you do not understand or cannot read a question raise your hand and someone will assist you. When you have finished the questionnaire put it in the envelope that has been provided by the monitor. No one at the school will see or read your answers. The envelope will be sealed after the last questionnaire is completed. All the envelopes will be immediately taken to the University to be coded and entered into the computer. All questionnaires will be destroyed after the computer file has been set up.

Part 1. Background Information

1. I am

- Female
- Male

2. My ethnic background is? (Please check the correct one.)

- Alaska Native
- American Indian
- Asian or Pacific Islander
- Black
- Hispanic
- White
- Other: Which _____

3. How old were you as of your last birthday? _____

4. What grade are you in? (Please check the correct one.)

- 6th
- 7th
- 8th
- 9th
- 10th
- 11th
- 12th

5. Have you ever taken part in an alcohol or drug education/prevention program in one of your classes?

- No (Go to #7)
- Yes (continue)

6. Which grade(s) did you take part in a drug education program? (Check all that apply)

- 5th grade or below
- 6th grade
- 7th grade
- 8th grade
- 9th grade
- 10th grade
- 11th grade
- 12th grade

7. What grades do you usually get? (Check only the one that applies to you in each of the two columns.)

During this school year

- Mostly A's
- Mostly A's and B's
- Mostly B's
- Mostly B's and C's
- Mostly C's
- Mostly C's and D's
- Mostly D's and F's

During the year before

- Mostly A's
- Mostly A's and B's
- Mostly B's
- Mostly B's and C's
- Mostly C's
- Mostly C's and D's
- Mostly D's and F's

8. How many years have you lived in this community? _____

prescription.

9. Have you ever had any chance to try any of the drugs listed below? Check all that were possible.

___ Marijuana
(pot, hash)

___ Depressants
(downers)

___ Inhalants
(Gasoline, Glue, etc.)

___ Tranquilizers
(librium, valium, etc.)

___ Hallucinogens
(LSD, PCP)

___ Alcohol
(beer, wine, liquor)

___ Cocaine
(coke)

___ Crack
(rock)

___ Tobacco
(cigarettes)

___ Chewing Tobacco

___ Heroin
(smack)

___ Stimulants
(uppers)

10. If you have tried a drug, how many times have you ever used any of the ones listed below during your lifetime? Check the column that best describes your experience with each drug. If you have Never tried a drug skip to Part 3.

Never Used 1-2 Times 3-5 Times 6-9 Times 10-19 Times 20-39 Times 40+ Times

	Never Used	1-2 Times	3-5 Times	6-9 Times	10-19 Times	20-39 Times	40+ Times
Marijuana (pot, hash)							
Inhalants (gasoline, glue, etc.)							
Hallucinogens (LSD, PCP)							
Cocaine (coke)							
Crack							
Heroin (smack)							
Stimulants (uppers)							
Depressants (downers)							

Check the column that best describes your experience with each drug.

	Never Used	1-2 Times	3-5 Times	6-9 Times	10-19 Times	20-39 Times	40+ Times
Marijuana (pot, hash)							
Inhalants (gasoline, glue, etc.)							
Hallucinogens (LSD, PCP)							
Cocaine (coke)							
Crack							
Heroin (smack)							
Stimulants (uppers)							
Depressants (downers)							

12. How many times have you ever used any of the ones listed below during the past 30 days?
Check the column that best describes your experience with each drug.

	Never Used	1-2 Times	3-5 Times	6-9 Times	10-19 Times	20-39 Times	40+ Times
Marijuana (pot, hash)							
Inhalants (gasoline, glue, etc.)							
Hallucinogens (LSD, PCP)							
Cocaine (coke)							
Crack							
Heroin (smack)							
Stimulants (uppers)							
Depressants (downers)							

13. If you have tried one of the substances listed above, please report the age you first tried it for every one that you tried.

Marijuana_____	Inhalants_____
Hallucinogens_____	Cocaine_____
Crack_____	Heroin_____
Stimulants_____	Depressants_____
Tranquilizers_____	

Part 3.

If you HAVE NEVER TRIED A DRUG answer #14. If you have tried a drug, skip to #15.

14. If you have never tried a drug, was it because of any of the following?
(Check only one in each column that best applies to you for each item.)

<u>Because of:</u>	<u>Very True of me</u>	<u>Often True of me</u>	<u>Sometimes True for of me</u>	<u>Seldom True of me</u>	<u>Not True of me</u>
Fear of damage to my mind	—	—	—	—	—
Moral reasons	—	—	—	—	—
Knowing friends who had a bad trip	—	—	—	—	—
Fear of having a bad experience	—	—	—	—	—
No opportunity to try a drug	—	—	—	—	—
Disappoint my parents	—	—	—	—	—
Pressure from friends	—	—	—	—	—
May cause addiction	—	—	—	—	—
It is illegal	—	—	—	—	—
Not important for me to try	—	—	—	—	—
Because of something I learned in school.	—	—	—	—	—

(Skip to # 16)

15. Have any of the following ever happened to you as a result of your experience with any type of drug? (Check all that apply to you.)

<u>Times</u>	<u>Never</u>	<u>Once</u>	<u>2-3 Times</u>	<u>4 or more</u>
Gotten into trouble with your teachers or principal. . .	—	—	—	—
Had it get in the way of school work.	—	—	—	—
Gotten you in trouble with your friends.	—	—	—	—
Gotten you in trouble with the police.	—	—	—	—
Had a bad trip.	—	—	—	—
Resulted in an accident or injury to you or others. . .	—	—	—	—
Been suspended from school.	—	—	—	—

(Continue with #16)

16. Do you think the use of any of the drugs listed below has INCREASED in your school during the past year? (Please check all the ones you believe have gone up.)

<input type="checkbox"/> Alcohol	<input type="checkbox"/> Cocaine	<input type="checkbox"/> Stimulants
<input type="checkbox"/> Tobacco	<input type="checkbox"/> Crack	<input type="checkbox"/> Depressants
<input type="checkbox"/> Marijuana	<input type="checkbox"/> Hallucinogens	<input type="checkbox"/> Inhalants
<input type="checkbox"/> Heroin	<input type="checkbox"/> Tranquilizers	

17. Do you think the use of any of the drugs listed below has DECREASED in your school during the past year? (Please check all the ones you believe have gone down.)

- | | | |
|------------------------------------|--|--------------------------------------|
| <input type="checkbox"/> Alcohol | <input type="checkbox"/> Cocaine | <input type="checkbox"/> Stimulants |
| <input type="checkbox"/> Tobacco | <input type="checkbox"/> Crack | <input type="checkbox"/> Depressants |
| <input type="checkbox"/> Marijuana | <input type="checkbox"/> Hallucinogens | <input type="checkbox"/> Inhalants |
| <input type="checkbox"/> Heroin | <input type="checkbox"/> Tranquilizers | |

18. How many of your FRIENDS do you think have tried: (Check only one blank for each item.)

	<u>None</u>	<u>1 or 2</u>	<u>Several</u>	<u>Most</u>	<u>All</u>	<u>Don't Know</u>
Marijuana	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cocaine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Crack	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Stimulants	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hallucinogens	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Depressants	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Heroin	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inhalants	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tranquilizers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alcohol	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cigarettes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Smokeless tobacco	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

19. How many of your FRIENDS do you think use: (Check only one blank for each item.)

	<u>None</u>	<u>1 or 2</u>	<u>Several</u>	<u>Most</u>	<u>All</u>	<u>Don't Know</u>
Marijuana	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cocaine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Crack	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Stimulants	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hallucinogens	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Depressants	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Heroin	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inhalants	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alcohol	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cigarettes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Smokeless tobacco	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Part 4. The questions in this part ask about your experiences with beer, wine, and liquor.

20. Have you ever had a drink of wine, beer, or liquor - not just a sip or taste - with friends outside of your home?

- No (Go to Part 5)
 Yes (Continue)

21. Have you had a drink of wine, beer, or liquor - not just a sip or taste - with friends outside of your home during the past year?

- No
 Yes

22. How old were you when you had your first drink (not just a sip or taste) with friends at a party or some other kind of get together outside of your home? _____

23. During the past 30 days, how many times did you drink beer, wine, or liquor?

- No time
- 1 time
- 2-3 times
- 1-2 times a week
- 3-4 times a week
- 5-6 times a week
- Once a day
- More than once a day

24. During the past 30 days, think of each time when you had beer, wine, or liquor. Each time you drink, how many drinks do you usually have?

(Think of one can of beer, a glass of wine, or a mixed drink as equal to one drink.)

- I did not drink during this time
- 1 drink
- 2 drinks
- 3-5 drinks
- 6-10 drinks
- 11 or more drinks

25. During the past year, about how many times did you drink just to feel a little high or light-headed?

- None 2-3 times 6-10 times Twice a month
- One time 4-5 times Once a month Once a week or more

26. During the past year, about how many times have you gotten drunk or very, very high?

- None 2-3 times 6-10 times Twice a month
- One time 4-5 times Once a month Once a week or more

27. During the past year, about how many times have you gotten sick (nauseous or vomiting) as a result of drinking?

- None 2-3 times 6-10 times Twice a month
- One time 4-5 times Once a month Once a week or more

28. Have you ever had any of the following happen to you as a result of drinking?

(Place a check where it applies to you for each item.)

<u>Times</u>	<u>Never</u>	<u>Once</u>	<u>2-3 Times</u>	<u>4 or more</u>
Gotten into trouble with your teachers or principal. .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Had it get in the way of school work.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gotten you in trouble with your friends.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gotten you in trouble with the police.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gotten you in a fight.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Resulted in an accident or injury to you or others. ...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have driven when drinking?.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

29. How many of your close friends drink alcoholic beverages at least once a week?

- Most of my friends don't drink at all
- None of my friends drink at least once a week
- Some of my friends drink at least once a week
- Most of my friends drink at least once a week
- All of my friends drink at least once a week

Part 5. Tobacco

30. Have you ever tried smoking cigarettes?

No (Go to #38)

Yes (Continue)

31. Have you smoked more than two or three times and then stopped?

No (Continue)

Yes (Go to # 38)

32. How old were you when you first tried smoking cigarettes? _____

33. During the past 30 days, how many times have you smoked cigarettes?

None (Go to #37)

1 time

2-3 times

1-2 times a week

3-4 times a week

5-6 times a week

Once a day

Two or three times a day

More than four times a day

34. During the past 30 days, on the average, how many cigarettes have you smoked during a day?

1-5 cigarettes a day

6-10 cigarettes

11-15 cigarettes

16-20 cigarettes

21 or more cigarettes

35. Would you consider yourself:

An occasional smoker (go to #39)

A moderate smoker (Go to #36)

A light smoker (Go #36)

A heavy smoker (Go to #36)

36. How old were you when you became a light, moderate, or heavy smoker? _____

37. If you have stopped smoking, was it for any of these reasons? **IF YOU HAVE NOT QUIT GO TO #39.** (Check all that apply to you.)

Just didn't feel a need to smoke anymore

Fear of damage to my body

Parents disapproved

Friends disapproved

Because of something I learned in school

Other: _____

(Go to #39)

38. If you have never smoked, was it for any of the following reasons? (Check all that apply to you.)

Just don't feel a need to smoke

Fear of damage to my body

Parents disapproved

Friends disapproved

Because of something I learned in school

Other: _____

(Go to #39)

39. Have you ever tried chewing tobacco or smokeless tobacco (such as Skoal)?

No (Go to #45)

Yes

40. How old were you when you first tried chewing or smokeless tobacco? _____

41. How many times during the past month (30 days) have you used chewing tobacco?

None

1 time

2-3 times

1-2 times a week.

3-4 times a week

5-6 times a week.

Once a day

More than once a day

41. How many times during the past month (30 days) have you used smokeless tobacco?

None

1 time

2-3 times

1-2 times a week.

3-4 times a week

5-6 times a week.

Once a day

More than once a day

42. Would you consider yourself:

An occasional user

A moderate user

A light user

A heavy user

43. How old were you when you became a light, moderate, or heavy smokeless or chewing tobacco user? _____

44. If you have used smokeless or chewing tobacco but have now stopped, was it for any of these reasons? **IF YOU HAVE NOT QUIT SKIP TO PART 6.** (Check all that apply to you.)

Just didn't feel a need to use it anymore

Parents disapproved

Other: _____

Fear of damage to my body

Friends disapproved

45. If you have never used chewing or smokeless tobacco, was it for any of the following reasons? (Check all that apply to you.)

Just don't feel a need to use it

Friends disapproved

Parents disapproved

Fear of damage to my body

Because of something I learned in school

Other: _____

PLEASE GO TO PART 6 ON THE NEXT PAGE

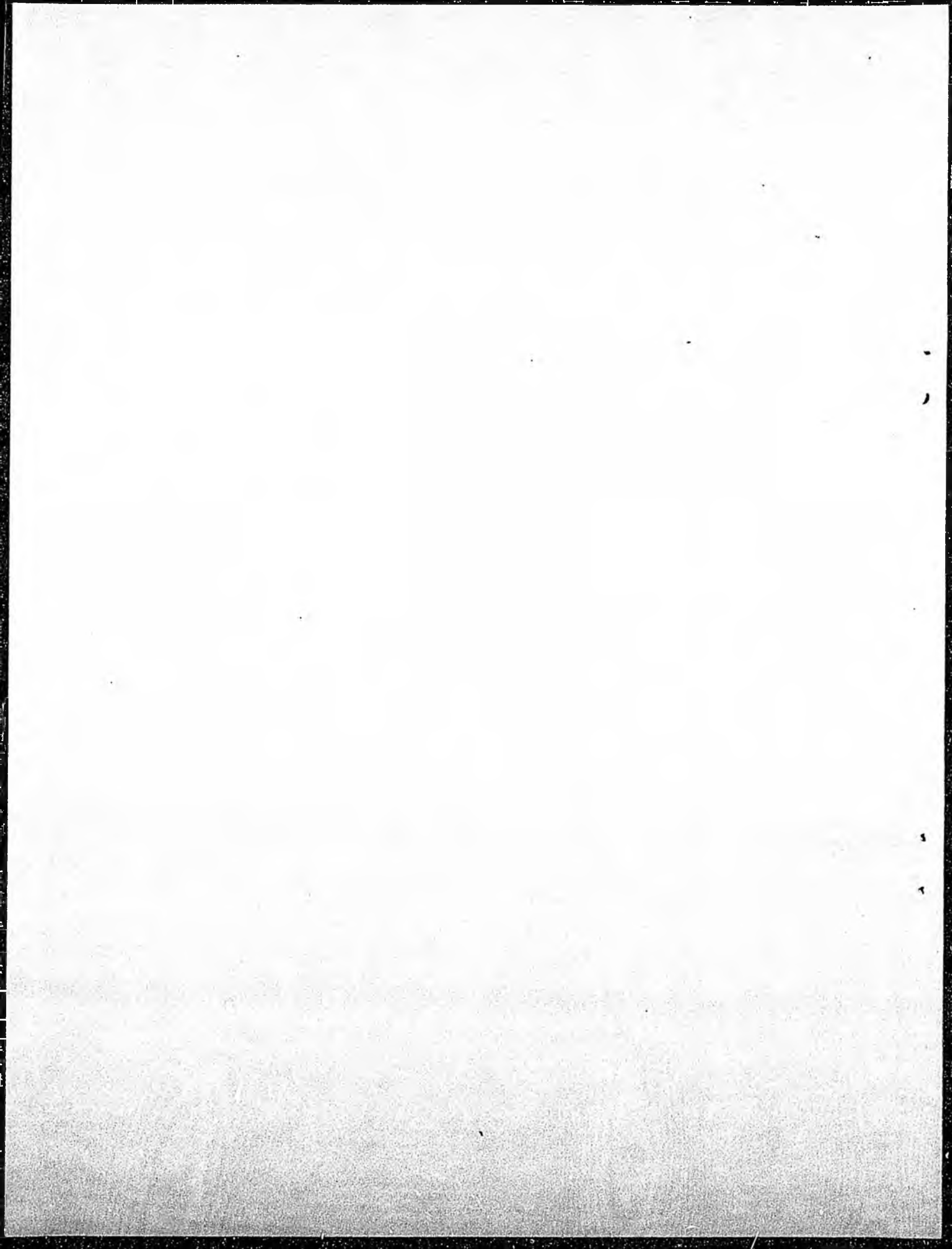
Part 6

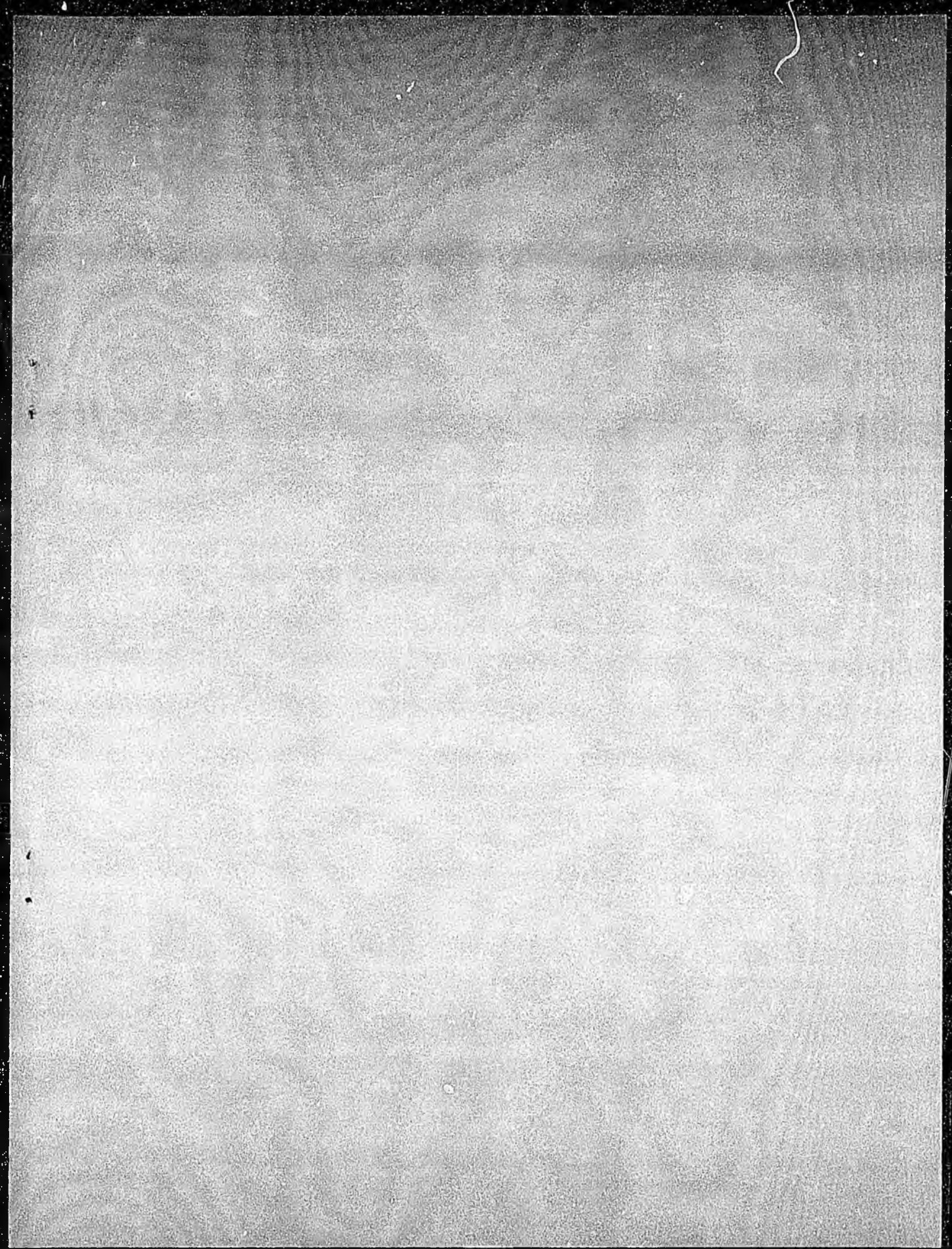
Please answer the following questions, whether you have used drugs or not, concerning some different feelings or experiences that people have. Read each item and check the statement that best describes you. Answer every item.

	<u>Very True of me</u>	<u>Often True of me</u>	<u>Sometimes True of me</u>	<u>Seldom True of me</u>	<u>Not True of me</u>
I would enjoy being a famous person.	—	—	—	—	—
I don't really have fun at parties.	—	—	—	—	—
I often act without thinking.	—	—	—	—	—
I enjoy being alone.	—	—	—	—	—
I am pretty cautious.	—	—	—	—	—
I daydream about doing hard tasks.	—	—	—	—	—
I care what others think about me.	—	—	—	—	—
I <u>do not</u> give up easily on a problem.	—	—	—	—	—
I feel that I have a lot of control over my future.	—	—	—	—	—
I often wish I had more good friends.	—	—	—	—	—
My daydreams often cheer me up when I feel sad.	—	—	—	—	—
I <u>almost never</u> ask for help or advice.	—	—	—	—	—
Being successful is important to me.	—	—	—	—	—
I like to tell others how to do things.	—	—	—	—	—
I try <u>not to</u> take life very seriously.	—	—	—	—	—
When I want something - I want it now - not later.	—	—	—	—	—
I'm afraid I'm <u>not</u> very popular.	—	—	—	—	—
I <u>am not</u> interested in anything unless it is exciting.	—	—	—	—	—
My feelings are easily hurt.	—	—	—	—	—
I sometimes question the reason why I do things.	—	—	—	—	—
Sometimes I take myself too seriously.	—	—	—	—	—
Being successful at what I do is important to me.	—	—	—	—	—
What others think of me <u>is not</u> important to me.	—	—	—	—	—
I like to feel free to come and go as I please	—	—	—	—	—
I <u>am not</u> easily pressured by my friends.	—	—	—	—	—

This is the end of the questionnaire

Thank you for help





FISCAL NOTE

REQUEST:

Revision Date: March 9, 1989
 Title: "...making less than eight ounces of marijuana a class B misdemeanor..."
 Sponsor: Senate Judiciary
 Requestor: Senate Judiciary
 Agency Affected: Department of Law
 BRU: Prosecution
 Components: Third Dist., Fourth Dist., Crim. Justice Litigation, Crim. Appeals.

EX. ENDITURES/REVENUES: (Thousands of Dollars)

OPERATING	FY 89	FY 90	FY 91	FY 92	FY 93	FY 94
PERSONAL SERVICES		167.4	172.4	177.6	182.9	188.4
TRAVEL		5.4	5.6	5.8	6.0	6.2
CONTRACTUAL		67.7	44.0	11.7	12.1	12.5
SUPPLIES		12.6	9.3	9.6	9.9	10.2
EQUIPMENT		6.0	-0-	-0-	-0-	-0-
LAND & STRUCTURES						
GRANTS, CLAIMS						
MISCELLANEOUS						
TOTAL OPERATING	-0-	259.1	231.3	204.7	210.9	217.3

CAPITAL						
---------	--	--	--	--	--	--

REVENUE						
---------	--	--	--	--	--	--

FUNDING: (Thousands of Dollars)

GENERAL FUND	-0-	259.1	231.3	204.7	210.9	217.3
FEDERAL FUNDS						
OTHER						
TOTAL						

POSITIONS:

FULL-TIME	-0-	2	2	2	2	2
PART-TIME		1	1	1	1	1
TEMPORARY						

ANALYSIS : (Attach a separate page if necessary)

The committee substitute for SB 18 changes the title and adds one additional legislative finding, otherwise there are no substantive changes. Consequently the department's original fiscal note of February 1, 1989, which is repeated below, remains unchanged.

Prepared by: Richard T. Pegues, Director Phone: 465-3672
 Division: Administrative Services Date: March 9, 1989
 Approved by Commissioner: Douglas B. Bailly, Attorney Gen. Date: March 9, 1989
 Agency: Department of Law

Distribution (by preparer):
 Legislative Finance
 Legislative Sponsor
 Requestor
 Office of Management and Budget
 Impacted Agency(ies)

RECEIVED
MAR 9 1989

CONTINUATION of FISCAL NOTE ANALYSIS

For Bill/Resolution No. CSSB 18 (Jud)

CSSB 18 is a blanket provision which would make possession or use of less than one-half pound of marijuana by anyone a class B misdemeanor. Some of the conduct which this bill would cover (such as use or display of any amount in a public place, possession of any amount while operating a motor vehicle, or possession of more than four ounces of marijuana anywhere) is a class B misdemeanor under existing law. See AS 11.71.060. Some of the conduct which this bill would make a crime (such as delivery of less than one-half ounce or possession of less than one ounce in public) is classified under current law as a "violation", punishable by a fine. See AS 11.71.070. The penalties under current law for other conduct such as delivery of one-half ounce or more, delivery to a minor, or possession of any amount on school grounds would not be altered. Penalties under existing law for these offenses range from an A misdemeanor to B felony level. See AS 11.71.030, .040, and .050.

The passage of CSSB 18 would have fiscal impact on the Department of Law in three general areas: (1) the cost of defending the new law against constitutional challenge; (2) the cost of processing the resulting additional criminal cases; and (3) the cost of educating the public about the new law. These three areas are discussed separately below. However, recriminalization of the personal possession of marijuana, currently allowed under Ravin, will involve defendants who are middle class people who can be expected to vigorously resist having a criminal record and vigorously resist the misdemeanor penalties provided for in the bill.

1. Defending the New Law

In 1975 the Alaska Supreme Court in the case of Ravin v. State, 537 P.2d 497 (Alaska 1975), ruled that under Art. I, Sec. 22 of the Alaska Constitution the state could not prohibit possession of marijuana by adults in their own homes for personal use. The court held that the state had not demonstrated the existence of a legitimate state interest which was strong enough to justify the regulation of this conduct.

Since passage of CSSB 18 would make it a crime for an adult to possess any amount of marijuana anywhere, including in his or her own home, the constitutionality of the new law is certain to be challenged. An appellate court will have to decide whether the state has proved that there is a "compelling state interest" in the prohibition of the use of marijuana which is sufficient to outweigh an individual's right to privacy under the state constitution. It is extremely important, therefore, that the legislature's consideration of this bill include extensive public hearings, debate on the social policy merits of the proposal, and the collection of the results of the most recent scientific, medical, and pharmacological studies regarding the physical, emotional, and social effects of marijuana usage.

CONTINUATION of FISCAL NOTE ANALYSIS

For Bill/Resolution No. CSSB 18 (Jud)

In addition to the necessary legislative hearings, evidentiary hearings at the trial court level can be expected when a challenge to the new law is filed. Challenges to the new law will most likely arise in the context of a defendant's pretrial motion to dismiss a criminal prosecution. When responding to such a defense motion, the prosecutor would, in essence, have to convince a court to reverse the ruling in the Ravin case. In order to demonstrate that the result in Ravin is no longer correct, the prosecutor would have to present convincing, scientifically accurate, evidence that the effects of marijuana usage are so injurious to a person's mental and physical health as to justify the legislative decision to totally prohibit use of marijuana by anyone at any time (as opposed to use by minors or use by a person who is operating a motor vehicle--both of which are already prohibited under current law).

The presentation of this convincing evidence will require the prosecution to present expert testimony from authorities who have conducted recent research in this area. Out-of-state witnesses in medical and scientific fields charge a fee for their services. These fees will vary from individual to individual, but are expected to average at least \$150 per hour. This would include services for consultation, witness preparation and actual testimony. Costs will be incurred for expert witness transportation, food and lodging, and other incidental expenses. Additionally, there will be some costs for preparation of exhibits and written reports. To the extent possible, the Department of Law would attempt to present written testimony in situations where it is not feasible to fly a person to Alaska to testify in person. We estimate that a minimum of six expert witnesses will be required to attempt to successfully defend the new law at the trial court level.

Hearings at the trial court level can reasonably be expected to take several days. A substantial commitment of attorney time will be required for scientific and legal research in preparation for the hearings, actual court time, legal briefing, and the preparation of proposed findings of fact. Since prosecutions under the new law will occur statewide, defense challenges may be raised at the same time in different parts of the state. The extensive hearings described above may have to be held in more than one judicial district in the state.

Regardless of which side prevails at the trial court level, the lower court ruling would almost certainly be followed by an appeal. At a minimum, such an appeal (or appeals) would require additional legal research, a thorough review of the record, the drafting of briefs, and oral argument before the appellate court and the Supreme Court.

2. New Criminal Cases

Although some of the conduct included within the scope of SB 18 is already against the law, much behavior which is now classified

CONTINUATION of FISCAL NOTE ANALYSIS

For Bill/Resolution No. CSSB 18 (Jud)

as a "violation" or which is not now an offense of any sort will become a misdemeanor crime. It is difficult to accurately predict in advance the impact which the passage of CSSB 18 will have on the criminal justice system.

In the past, some law enforcement officers who work primarily in the drug enforcement area indicated that the new law could potentially result in "thousands" of new misdemeanor cases a year. The police now doubt this but, nonetheless, a large number of the new cases would arise from situations where law enforcement officers now commonly discover small amounts of marijuana (as when an officer responds to a domestic disturbance call and sees some marijuana plants in a person's home, or when a person is arrested for a minor offense and a routine search for weapons reveals some marijuana cigarettes in the person's pocket, for example). Incidents of this sort occur frequently now, but do not generally result in any criminal prosecution for the marijuana possession. Many of these cases are likely to be referred for criminal prosecution if CSSB 18 becomes law, police officers will not ignore evidence of wrongdoing that is in plain view. Many of these defendants are middle-class people who can be expected to vigorously resist having a criminal record. Class B misdemeanors, as opposed to the violations, entitle a defendant to a jury trial and court-appointed counsel.

Prosecutors generally predict a lesser number of new potential criminal cases under CSSB 18 than the "thousands" that were once predicted. Once the public becomes aware of the new law, some people are likely to become more careful about not allowing marijuana or smoking paraphernalia to be exposed in plain view in their homes, for example. Judging from the number of minor marijuana offenses prosecuted prior to the Ravin decision in 1975, prosecutors still expect a "few hundred" new criminal cases a year.

Cases which are accepted for prosecution will require attorney time both at trial and in preparation for trial (i.e., preparation of search warrants, response to defense motions, evaluation of results of laboratory analysis, pretrial witness preparation, etc.). To handle screening of the expected case referrals, and to prosecute the additional cases, the criminal division will require the addition of at least two Attorney III positions in Anchorage. It is anticipated that a half-time attorney will also be needed in the Fairbanks District Attorney's office.

This fiscal note reflects the fact that the pretrial diversion program was entirely eliminated in FY 88. Anticipating that more than fifty percent of defendants would qualify for diversion, we must prepare for a gross increase in the number of cases that will go to trial.

CONTINUATION of FISCAL NOTE ANALYSIS

For Bill/Resolution No. CSSB 18 (Jud)

3. Public Education

In order to inform the public of the changes in the law, the Department of Law will develop and disseminate public notices explaining the new law. These notices will include newspaper ads and brochures, and will be modeled upon the public education notices which were distributed statewide in connection with the new drug law in 1982 and the new DWI and drinking age laws in 1983. Based upon experience with these earlier notices, approximately \$25,000 will be needed to cover the costs of writing, layout, typesetting, publication, and distribution.

In addition to the costs explained above, it is anticipated that the passage of this bill will result in increased costs to other components of the criminal justice system, including law enforcement, the courts, the public defender agency, the Office of Public Advocacy, and corrections.

CONTINUATION of FISCAL NOTE ANALYSIS

CSSB 18 (Jud)

For Bill/Resolution No. _____

Fiscal Analysis

1. Defending the New Law

Criminal Appeals & Special Prosecution Component/Prosc. - BRU

<u>Object</u>	<u>Total</u>
Contractual Services -	
Professional fees scientific experts	
120 hrs. X \$150 =	\$18,000
Experts' staff support, preparation	
of exhibits, written testimony	
50 hrs. X \$60 =	3,000
Experts' travel to attend hearings	
and offer testimony	
6 trips X 4 days X \$80 = \$1,920 subsistence	1,920
6 trips X \$1,500 = \$9,000 travel	9,000
	<u>\$31,920</u>

This amount will be required for both FY 90 and FY 91, to cover both trials and appeals.

CONTINUATION of FISCAL NOTE ANALYSIS

CSSB 18 (Jud)

For Bill/Resolution No. _____

Fiscal Analysis - (cont'd)

2. New Criminal Cases

Third Judicial District - Anchorage

	Atty III (PFT)	Atty III (PFT)	Total
Personal Services	65.2	65.2	130.4
Travel - Witness travel subsistence, atty. travel	1.8	1.8	3.6
Contractual Services			
office commo. equip. repairs	2.4	2.4	4.8
copy - postage	1.2	1.2	<u>2.4</u>
			7.2
Commodities - Ongoing			
office consumables	1.8	1.8	3.6
Law library	1.2	1.2	2.4
Commodities - one time			
New position materials	1.2	1.2	<u>2.4</u>
			8.4
Equipment - one time			
New position equipment	2.0	2.0	4.0
	<hr/>	<hr/>	<hr/>
	76.8	76.8	153.6

CONTINUATION of FISCAL NOTE ANALYSIS

CSSB 18 (Jud)

For Bill/Resolution No. _____

Fiscal Analysis - (cont'd)

Fourth Judicial District - Fairbanks

	Atty. III <u>(PPT)</u>	<u>Total</u>
Personal Services	37.0	37.0
Travel - Witness travel subsistence, Atty. travel	1.8	1.8
Contractual Services		
office commo., equip. repair	2.4	2.4
copy - postage	1.2	<u>1.2</u>
		3.6
Commodities - Ongoing		
office consumables	1.8	1.8
Law library	1.2	1.2
Commodities - one time		
New position materials	1.2	<u>1.2</u>
		4.2
Equipment - one time		
New position equipment	2.0	2.0

		48.6

CONTINUATION of FISCAL NOTE ANALYSIS

CSSB 18 (Jud)

For Bill/Resolution No. _____

Fiscal Analysis - (cont'd)

3. Public Education

Criminal Justice Litigation Component/Prosc. BRU

<u>Object</u>	<u>Total</u>
Contractual Services - one time writing, layout, typesetting, publication and distribution of public notices and information brochures describing the changes in the law.	25.0

	25.0

Summary of Expenses (All Components)

	<u>Defending the new law</u>	<u>New Criminal Cases</u>	<u>Public Education</u>	<u>Total</u>
Personal Services		167.4		167.4
Travel		5.4		5.4
Contractual	31.9	10.8	25.0	67.7
Commodities		12.6		12.6
Equipment		6.0		6.0
	-----	-----	-----	-----
	31.9	202.2	25.0	259.1

Costs beyond FY 90 include a 3 per cent inflation factor, less one-time items. The costs for defending the new law will occur in both FY 90 and FY 91 and they will be eliminated thereafter.

STATE OF ALASKA
1989 LEGISLATIVE SESSION

BILL VERSION: SB 18 (a)
PUBLISH DATE: 3/8/89

FISCAL NOTE

FEB 02 1989

REQUEST:

Revision Date: _____
Title: "An Act relating to marijuana; and providing for an effective date."
Sponsor: Sen. Fischer
Requestor: Sen. Fischer

Agency Affected: Department of Law
BRU: Prosecution

Components: Third Dist., Fourth Dist., Crim. Justice Litigation, Crim. Appeals.

EXPENDITURES/REVENUES: (Thousands of Dollars)

OPERATING	FY 89	FY 90	FY 91	FY 92	FY 93	FY 94
PERSONAL SERVICES		167.4	172.4	177.6	182.9	188.4
TRAVEL		5.4	5.6	5.8	6.0	6.2
CONTRACTUAL		67.7	44.0	11.7	12.1	12.5
SUPPLIES		12.6	9.3	9.6	9.9	10.2
EQUIPMENT		6.0	-0-	-0-	-0-	-0-
LAND & STRUCTURES						
GRANTS, CLAIMS						
MISCELLANEOUS						
TOTAL OPERATING	-0-	259.1	231.3	204.7	210.9	217.3

CAPITAL						
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REVENUE						
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FUNDING: (Thousands of Dollars)

GENERAL FUND	-0-	259.1	231.3	204.7	210.9	217.3
FEDERAL FUNDS						
OTHER						
TOTAL						

POSITIONS:

FULL-TIME	-0-	2	2	2	2	2
PART-TIME		1	1	1	1	1
TEMPORARY						

ANALYSIS : (Attach a separate page if necessary)

Please see the attached analysis.

Richard I. Pegues

Prepared by: Richard I. Pegues, Director

Division: Administrative Services Division

Richard I. Pegues / FOR

Approved by Commissioner: Grace Berg Schaible, Atty. Gen.

Agency: Department of Law

Phone: 465-3672

Date: February 1, 1989

Date: February 1, 1989

Distribution (by preparer):

- Legislative Finance
- Legislative Sponsor
- Requestor
- Office of Management and Budget
- Impacted Agency(ies)

CONTINUATION of FISCAL NOTE ANALYSIS

For Bill/Resolution No. SB 18

Senate Bill 18 is a blanket provision which would make possession or use of less than one-half pound of marijuana by anyone a class B misdemeanor. Some of the conduct which this bill would cover (such as use or display of any amount in a public place, possession of any amount while operating a motor vehicle, or possession of more than four ounces of marijuana anywhere) is a class B misdemeanor under existing law. See AS 11.71.060. Some of the conduct which this bill would make a crime (such as delivery of less than one-half ounce or possession of less than one ounce in public) is classified under current law as a "violation", punishable by a fine. See AS 11:71.070. The penalties under current law for other conduct such as delivery of one-half ounce or more, delivery to a minor, or possession of any amount on school grounds would not be altered. Penalties under existing law for these offenses range from an A misdemeanor to B felony level. See AS 11.71.030, .040, and .050.

The passage of SB 18 would have fiscal impact on the Department of Law in three general areas: (1) the cost of defending the new law against constitutional challenge; (2) the cost of processing the resulting additional criminal cases; and (3) the cost of educating the public about the new law. These three areas are discussed separately below. However, recriminalization of the personal possession of marijuana, currently allowed under Ravin, will involve defendants who are middle class people who can be expected to vigorously resist having a criminal record and vigorously resist the misdemeanor penalties provided for in the bill.

1. Defending the New Law

In 1975 the Alaska Supreme Court in the case of Ravin v. State, 537 P.2d 497 (Alaska 1975), ruled that under Art. I, Sec. 22 of the Alaska Constitution the state could not prohibit possession of marijuana by adults in their own homes for personal use. The court held that the state had not demonstrated the existence of a legitimate state interest which was strong enough to justify the regulation of this conduct.

Since passage of SB 18 would make it a crime for an adult to possess any amount of marijuana anywhere, including in his or her own home, the constitutionality of the new law is certain to be challenged. An appellate court will have to decide whether the state has proved that there is a "compelling state interest" in the prohibition of the use of marijuana which is sufficient to outweigh an individual's right to privacy under the state constitution. It is extremely important, therefore, that the legislature's consideration of this bill include extensive public hearings, debate on the social policy merits of the proposal, and the collection of the results of the most recent scientific, medical, and pharmacological studies regarding the physical, emotional, and social effects of marijuana usage.

CONTINUATION of FISCAL NOTE ANALYSIS

For Bill/Resolution No. SR 18

In addition to the necessary legislative hearings, evidentiary hearings at the trial court level can be expected when a challenge to the new law is filed. Challenges to the new law will most likely arise in the context of a defendant's pretrial motion to dismiss a criminal prosecution. When responding to such a defense motion, the prosecutor would, in essence, have to convince a court to reverse the ruling in the Ravin case. In order to demonstrate that the result in Ravin is no longer correct, the prosecutor would have to present convincing, scientifically accurate, evidence that the effects of marijuana usage are so injurious to a person's mental and physical health as to justify the legislative decision to totally prohibit use of marijuana by anyone at any time (as opposed to use by minors or use by a person who is operating a motor vehicle--both of which are already prohibited under current law).

The presentation of this convincing evidence will require the prosecution to present expert testimony from authorities who have conducted recent research in this area. Out-of-state witnesses in medical and scientific fields charge a fee for their services. These fees will vary from individual to individual, but are expected to average at least \$150 per hour. This would include services for consultation, witness preparation and actual testimony. Costs will be incurred for expert witness transportation, food and lodging, and other incidental expenses. Additionally, there will be some costs for preparation of exhibits and written reports. To the extent possible, the Department of Law would attempt to present written testimony in situations where it is not feasible to fly a person to Alaska to testify in person. We estimate that a minimum of six expert witnesses will be required to attempt to successfully defend the new law at the trial court level.

Hearings at the trial court level can reasonably be expected to take several days. A substantial commitment of attorney time will be required for scientific and legal research in preparation for the hearings, actual court time, legal briefing, and the preparation of proposed findings of fact. Since prosecutions under the new law will occur statewide, defense challenges may be raised at the same time in different parts of the state. The extensive hearings described above may have to be held in more than one judicial district in the state.

Regardless of which side prevails at the trial court level, the lower court ruling would almost certainly be followed by an appeal. At a minimum, such an appeal (or appeals) would require additional legal research, a thorough review of the record, the drafting of briefs, and oral argument before the appellate court and the Supreme Court.

2. New Criminal Cases

Although some of the conduct included within the scope of SB 18 is already against the law, much behavior which is now classified

CONTINUATION of FISCAL NOTE ANALYSIS

For Bill/Resolution No. SB 18

as a "violation" or which is not now an offense of any sort will become a misdemeanor crime. It is difficult to accurately predict in advance the impact which the passage of SB 18 will have on the criminal justice system.

In the past, some law enforcement officers who work primarily in the drug enforcement area indicated that the new law could potentially result in "thousands" of new misdemeanor cases a year. The police now doubt this but, nonetheless, a large number of the new cases would arise from situations where law enforcement officers now commonly discover small amounts of marijuana (as when an officer responds to a domestic disturbance call and sees some marijuana plants in a person's home, or when a person is arrested for a minor offense and a routine search for weapons reveals some marijuana cigarettes in the person's pocket, for example). Incidents of this sort occur frequently now, but do not generally result in any criminal prosecution for the marijuana possession. Many of these cases are likely to be referred for criminal prosecution if SB 18 becomes law, police officers will not ignore evidence of wrongdoing that is in plain view. Many of these defendants are middle-class people who can be expected to vigorously resist having a criminal record. Class B misdemeanors, as opposed to the violations, entitle a defendant to a jury trial and court-appointed counsel.

Prosecutors generally predict a lesser number of new potential criminal cases under SB 18 than the "thousands" that were once predicted. Once the public becomes aware of the new law, some people are likely to become more careful about not allowing marijuana or smoking paraphernalia to be exposed in plain view in their homes, for example. Judging from the number of minor marijuana offenses prosecuted prior to the Ravin decision in 1975, prosecutors still expect a "few hundred" new criminal cases a year.

Cases which are accepted for prosecution will require attorney time both at trial and in preparation for trial (i.e., preparation of search warrants, response to defense motions, evaluation of results of laboratory analysis, pretrial witness preparation, etc.). To handle screening of the expected case referrals, and to prosecute the additional cases, the criminal division will require the addition of at least two Attorney III positions in Anchorage. It is anticipated that a half-time attorney will also be needed in the Fairbanks District Attorney's office.

This fiscal note reflects the fact that the pretrial diversion program was entirely eliminated in FY 88. Anticipating that more than fifty percent of defendants would qualify for diversion, we must prepare for a gross increase in the number of cases that will go to trial.

CONTINUATION of FISCAL NOTE ANALYSIS

For Bill/Resolution No. SB 18

3. Public Education

In order to inform the public of the changes in the law, the Department of Law will develop and disseminate public notices explaining the new law. These notices will include newspaper ads and brochures, and will be modeled upon the public education notices which were distributed statewide in connection with the new drug law in 1982 and the new DWI and drinking age laws in 1983. Based upon experience with these earlier notices, approximately \$25,000 will be needed to cover the costs of writing, layout, typesetting, publication, and distribution.

In addition to the costs explained above, it is anticipated that the passage of this bill will result in increased costs to other components of the criminal justice system, including law enforcement, the courts, the public defender agency, the Office of Public Advocacy, and corrections.

CONTINUATION of FISCAL NOTE ANALYSIS
SB 18

For Bill/Resolution No. _____

Fiscal Analysis

1. Defending the New Law

Criminal Appeals & Special Prosecution Component/Prosc. - BRU

<u>Object</u>	<u>Total</u>
Contractual Services -	
Professional fees scientific experts	
120 hrs. X \$150 =	\$18,000
Experts' staff support, preparation	
of exhibits, written testimony	
50 hrs. X \$60 =	3,000
Experts' travel to attend hearings	
and offer testimony	
6 trips X 4 days X \$80 = \$1,920 subsistence	1,920
6 trips X \$1,500 = \$9,000 travel	9,000
	<u>\$31,920</u>

This amount will be required for both FY 90 and FY 91, to cover both trials and appeals.

CONTINUATION of FISCAL NOTE ANALYSIS

For Bill/Resolution No. SB 18

Fiscal Analysis - (cont'd)

2. New Criminal Cases

Third Judicial District - Anchorage

	Atty III (PFT)	Atty III (PFT)	<u>Total</u>
Personal Services	65.2	65.2	130.4
Travel - Witness travel subsistence, atty. travel	1.8	1.8	3.6
Contractual Services			
office commo. equip. repairs	2.4	2.4	4.8
copy - postage	1.2	1.2	<u>2.4</u>
			7.2
Commodities - Ongoing			
office consumables	1.8	1.8	3.6
Law library	1.2	1.2	2.4
Commodities - one time			
New position materials	1.2	1.2	<u>2.4</u>
			8.4
Equipment - one time			
New position equipment	2.0	2.0	4.0
	<hr style="width: 50px; margin: 0 auto;"/>	<hr style="width: 50px; margin: 0 auto;"/>	<hr style="width: 50px; margin: 0 auto;"/>
	76.8	76.8	153.6

CONTINUATION of FISCAL NOTE ANALYSIS

For Bill/Resolution No. SB 18

Fiscal Analysis - (cont'd)

Fourth Judicial District - Fairbanks

	Atty. III (PPT)	<u>Total</u>
Personal Services	37.0	37.0
Travel - Witness travel subsistence, Atty. travel	1.8	1.8
Contractual Services		
office commo., equip. repair	2.4	2.4
copy - postage	1.2	<u>1.2</u>
		3.6
Commodities - Ongoing		
office consumables	1.8	1.8
Law library	1.2	1.2
Commodities - one time		
New position materials	1.2	<u>1.2</u>
		4.2
Equipment - one time		
New position equipment	2.0	2.0
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		48.6

CONTINUATION of FISCAL NOTE ANALYSIS

For Bill/Resolution No. SB 18

Fiscal Analysis - (cont'd)

3. Public Education

Criminal Justice Litigation Component/Prosc. BRU

<u>Object</u>	<u>Total</u>
Contractual Services - one time writing, layout, typesetting, publication and distribution of public notices and information brochures describing the changes in the law.	25.0
	25.0

Summary of Expenses (All Components)

	<u>Defending the new law</u>	<u>New Criminal Cases</u>	<u>Public Education</u>	<u>Total</u>
Personal Services		167.4		167.4
Travel		5.4		5.4
Contractual	31.9	10.8	25.0	67.7
Commodities		12.6		12.6
Equipment		6.0		6.0
	31.9	202.2	25.0	259.1

Costs beyond FY 90 include a 3 per cent inflation factor, less one-time items. The costs for defending the new law will occur in both FY 90 and FY 91 and they will be eliminated thereafter.

FISCAL NOTE FEB 07 1989

REQUEST:

Revision Date: _____
Title: "An Act relating to marijuana..."

Agency Affected: Department of Administration
BRU: Public Defender Agency

Sponsor: Fischer, Faiks, Kelly, Jones,
Requestor: Sturculewski, Pearce
and Binkley

Components: Third and Fourth Judicial
Districts

EXPENDITURES/REVENUES: (Thousands of Dollars)

OPERATING	FY 89	FY 90	FY 91	-FY-92-	FY 93	FY 94
PERSONAL SERVICES		141.2	146.8	152.7	158.9	165.2
TRAVEL		-0-	-0-	-0-	-0-	-0-
CONTRACTUAL		27.5	10.4	10.8	11.2	11.6
SUPPLIES		2.0	2.1	2.2	2.3	2.4
EQUIPMENT		3.0	-0-	-0-	-0-	-0-
LAND & STRUCTURES						
GRANTS, CLAIMS						
MISCELLANEOUS						
TOTAL OPERATING	-0-	173.7	159.3	165.7	172.3	179.2

CAPITAL						
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REVENUE						
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FUNDING: (Thousands of Dollars)

GENERAL FUND	-0-	173.7	159.3	165.7	172.3	179.2
FEDERAL FUNDS						
OTHER						
TOTAL	-0-	173.7	159.3	165.7	172.3	179.2

POSITIONS:

FULL-TIME	-0-	2.0	2.0	2.0	2.0	2.0
PART-TIME						
TEMPORARY						

ANALYSIS : (Attach a separate page if necessary)

(See attached)

Prepared by: John B. Salemi, Acting Public Defender
Division: Public Defender Agency

Phone: 279-7541
Date: 2/3/89

Approved by Commissioner: John Andrews
Agency: Department of Administration

Date: 2/6/89

Distribution (by preparer):

Legislative Finance
Legislative Sponsor
Requestor
Office of Management and Budget
Impacted Agency(ies)

CONTINUATION of FISCAL NOTE ANALYSIS

For Bill/Resolution No. SB 18

This "marijuana bill" essentially eliminates the protected use of small amounts of marijuana in the home by individual citizens as enunciated by the Alaska Supreme Court in Ravin v. State in 1975. This bill reinstates the prosecution of marijuana possession in any amount possessed at any location. It would likely result in a significant number of new cases for the Department of Law, the Public Defender Agency and the Office of Public Advocacy. The Department of Law has submitted a fiscal note requesting 2.5 new attorney positions. The Public Defender Agency feels it would need an Attorney III in Anchorage and an Attorney III in Fairbanks for a total of 173.7 to respond adequately to these prosecutions. It should be noted that at the early stages of enactment of this bill there will be substantial litigation over its constitutionality, which will necessarily include the use of expert witnesses at substantial expense.

BUDGET ANALYSIS

100	Attorney III - Anchorage	66.4	
	Attorney III - Fairbanks	74.8	141.2
200	Travel		-0-
300	Contractual - Space, phone, etc.	10.0	
	Litigation, one time	17.5	27.5
400	Supplies - Law Library, office, etc.		2.0
500	Equipment - One time		3.0
	TOTAL		173.7

FISCAL NOTE

REQUEST:

Revision Date: _____
Title: "An Act relating to marijuana..."

Agency Affected: Department of Administration
BRU: Public Defender Agency

Sponsor: Fischer, Faiks, Kelly, et al.
Requestor: Senate Judiciary

Components: Third and Fourth Judicial Districts

EXPENDITURES/REVENUES: (Thousands of Dollars)

OPERATING	FY 89	FY 90	FY 91	FY 92	FY 93	FY 94
PERSONAL SERVICES		141.2	146.8	152.7	158.8	165.2
TRAVEL		-0-	-0-	-0-	-0-	-0-
CONTRACTUAL		27.5	10.4	10.8	11.2	11.6
SUPPLIES		2.0	2.1	2.2	2.3	2.4
EQUIPMENT		3.0	-0-	-0-	-0-	-0-
LAND & STRUCTURES						
GRANTS, CLAIMS						
MISCELLANEOUS						
TOTAL OPERATING	-0-	173.7	159.3	165.7	172.3	179.2

CAPITAL						
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REVENUE						
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FUNDING: (Thousands of Dollars)

GENERAL FUND	-0-	173.7	159.3	165.7	172.3	179.2
FEDERAL FUNDS						
OTHER						
TOTAL	-0-	173.7	159.3	165.7	172.3	179.2

POSITIONS:

FULL-TIME	-0-	2.0	2.0	2.0	2.0	2.0
PART-TIME						
TEMPORARY						

ANALYSIS : (Attach a separate page if necessary)

As to the legal effect and fiscal impact, CSSB 18 is identical to the original SB 18. The only changes are as to the title of the bill and the inclusion of one additional "finding". Therefore our fiscal note is unchanged.

Prepared by: John B. Salemi, Public Defender Phone: 279-7541
Division: Public Defender Agency Date: 3/9/89

Approved by Commissioner: John Andrews Date: 3/10/89
Agency: Department of Administration

Distribution (by preparer):

Legislative Finance
Legislative Sponsor
Requestor
Office of Management and Budget
Impacted Agency(ies)

CONTINUATION of FISCAL NOTE ANALYSIS

For Bill/Resolution No. CS SB 18 (Jud)

This "marijuana bill" essentially eliminates the protected use of small amounts of marijuana in the home by individual citizens as enunciated by the Alaska Supreme Court in Ravin v. State in 1975. This bill reinstates the prosecution of marijuana possession in any amount possessed at any location. It would likely result in a significant number of new cases for the Department of Law, the Public Defender Agency and the Office of Public Advocacy. The Department of Law has submitted a fiscal note requesting 2.5 new attorney positions. The Public Defender Agency feels it would need an Attorney III in Anchorage and an Attorney III in Fairbanks for a total of 173.7 to respond adequately to these prosecutions. It should be noted that at the early stages of enactment of this bill there will be substantial litigation over its constitutionality, which will necessarily include the use of expert witnesses at substantial expense.

BUDGET ANALYSIS

100	Attorney III - Anchorage	66.4	
	Attorney III - Fairbanks	74.8	141.2
200	Travel		-0-
300	Contractual - Space, phone, etc.	10.0	
	Litigation, one time	17.5	27.5
400	Supplies - Law Library, office, etc.		2.0
500	Equipment - One time		<u>3.0</u>
		TOTAL	173.7

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FISCAL NOTE

REQUEST:

Revision Date: 1/31/89
Title: "An Act relating to marijuana;..."
Sponsor: Fischer, Faiks, et. al.
Requestor: Senate Judiciary

Agency Affected: Administration
BRU: Office of Public Advocacy
Components: _____

EXPENDITURES/REVENUES: (Thousands of Dollars)

OPERATING	FY 89	FY 90	FY 91	FY 92	FY 93	FY 94
PERSONAL SERVICES	-0-	99.3	103.3	107.4	111.7	116.2
TRAVEL		0	0	0	0	0
CONTRACTUAL		60.0	62.4	64.9	67.5	70.2
SUPPLIES		2.0	2.8	2.9	3.0	3.1
EQUIPMENT		11.0	0	0	0	0
LAND & STRUCTURES						
GRANTS, CLAIMS						
MISCELLANEOUS						
TOTAL OPERATING	-0-	172.3	168.5	175.2	182.2	189.5

CAPITAL						
---------	--	--	--	--	--	--

REVENUE						
---------	--	--	--	--	--	--

FUNDING: (Thousands of Dollars)

GENERAL FUND	-0-	172.3	168.5	175.2	182.2	189.5
FEDERAL FUNDS						
OTHER						
TOTAL	-0-	172.3	168.5	175.2	182.2	189.5

POSITIONS:

FULL-TIME	-0-	2.0	2.0	2.0	2.0	2.0
PART-TIME						
TEMPORARY						

ANALYSIS : (Attach a separate page if necessary)

See Attached

Prepared by: Brant McGee Phone: 274-1684
Division: Office of Public Advocacy Date: 1/31/89

Approved by Commissioner: John Andrews Date: 2/1/89
Agency: Department of Administration

Distribution (by preparer):
Legislative Finance
Legislative Sponsor
Requestor
Office of Management and Budget
Impacted Agency(ies)

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FEB 1 1989

SB 18

CONTINUATION of FISCAL NOTE ANALYSIS

For Bill/Resolution No. SB 18

This bill will recriminalize the use or possession of marijuana at any location and would result in a significant increase in the number of prosecutions for such offenses.

The Department of Law has requested 2.5 attorneys in Anchorage and Fairbanks in order to enforce this statute. The constitutionality of the statute, which appears to directly conflict with the Supreme Court's 1975 holding in Raven v. State, will undoubtedly be tested in extensive trial and appellate court proceedings.

The Office of Public Advocacy requests one new Attorney III position for Anchorage -- where the greatest number of prosecutions is likely to arise -- and \$60,000 in contractual funds to pay for representation in other areas and for expert witness fees necessary for trial proceedings.

Personal Services

Anchorage

Attorney III
Salary & Benefits = \$66,457 \$ 66.5

Legal Secretary I
Salary & Benefits = \$32,833 32.8

Subtotal Personal Services \$ 99.3

Contractual

Contract attorneys in rural areas
and expert witnesses 60.0

Supplies

Stationary and library supplies
for two new positions 2.0

Equipment

Office furniture and equipment for one
professional position at \$3,635 and one
secretary position at \$7,369 = \$11,004 11.0

TOTAL: \$172.3

FISCAL NOTE

REQUEST:

Revision Date: _____
Title: "An Act relating to
marijuana..."
Sponsor: Senate Judiciary
Requestor: Senate Finance

Agency Affected: Administration
BRU: Office of Public Advocacy
Components: _____

EXPENDITURES/REVENUES: (Thousands of Dollars)

OPERATING	FY 89	FY 90	FY 91	FY 92	FY 93	FY 94
PERSONAL SERVICES	-0-	99.3	103.3	107.4	111.7	116.2
TRAVEL		0	0	0	0	0
CONTRACTUAL		60.0	62.4	64.9	67.5	70.2
SUPPLIES		2.0	2.8	2.9	3.0	3.1
EQUIPMENT		11.0	0	0	0	0
LAND & STRUCTURES						
GRANTS, CLAIMS						
MISCELLANEOUS						
TOTAL OPERATING	-0-	172.3	168.5	175.2	182.2	189.5
CAPITAL						
REVENUE						

FUNDING: (Thousands of Dollars)

GENERAL FUND	-0-	172.3	168.5	175.2	182.2	189.5
FEDERAL FUNDS						
OTHER						
TOTAL	-0-	172.3	168.5	175.2	182.2	189.5

POSITIONS:

FULL-TIME	-0-	2.0	2.0	2.0	2.0	2.0
PART-TIME						
TEMPORARY						

ANALYSIS : (Attach a separate page if necessary)

See Attached

Brant McGee

Prepared by: Brant McGee, Public Advocate
Division: Office of Public Advocacy

Phone: 274-1684
Date: 3/8/89

Approved by Commissioner: John Andrews
Agency: Department of Administration

Date: 3/10/89

Distribution (by preparer):

- Legislative Finance
- Legislative Sponsor
- Requestor
- Office of Management and Budget
- Impacted Agency(ies)

CONTINUATION of FISCAL NOTE ANALYSIS

For Bill/Resolution No. CS SB 18 (Jud)

This bill will recriminalize the use or possession of marijuana at any location and would result in a significant increase in the number of prosecutions for such offenses.

The Department of Law has requested 2.5 attorneys in Anchorage and Fairbanks in order to enforce this statute. The constitutionality of the statute, which appears to directly conflict with the Supreme Court's 1975 holding in Raven v. State, will undoubtedly be tested in extensive trial and appellate court proceedings.

The Office of Public Advocacy requests one new Attorney III position for Anchorage -- where the greatest number of prosecutions is likely to arise -- and \$60,000 in contractual funds to pay for representation in other areas and for expert witness fees necessary for trial proceedings.

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Contract attorneys in rural areas
and expert witnesses 60.0

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for two new positions 2.0

Equipment

Office furniture and equipment for one
professional position at \$3,635 and one
secretary position at \$7,369 = \$11,004 11.0

TOTAL: \$172.3

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FISCAL NOTE

REQUEST:

Revision Date: 1/31/89
Title: "An Act relating to
marijuana;..."
Sponsor: Fischer, Faiks, et. al.
Requestor: Senate Judiciary

Agency Affected: Administration
BRU: Office of Public Advocacy

Components: _____

EXPENDITURES/REVENUES: (Thousands of Dollars)

OPERATING	FY 89	FY 90	FY 91	FY 92	FY 93	FY 94
PERSONAL SERVICES	-0-	99.3	103.3	107.4	111.7	116.2
TRAVEL		0	0	0	0	0
CONTRACTUAL		60.0	62.4	64.9	67.5	70.2
SUPPLIES		2.0	2.8	2.9	3.0	3.1
EQUIPMENT		11.0	0	0	0	0
LAND & STRUCTURES						
GRANTS, CLAIMS						
MISCELLANEOUS						
TOTAL OPERATING	-0-	172.3	168.5	175.2	182.2	189.5

CAPITAL						
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REVENUE						
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FUNDING: (Thousands of Dollars)

GENERAL FUND	-0-	172.3	168.5	175.2	182.2	189.5
FEDERAL FUNDS						
OTHER						
TOTAL	-0-	172.3	168.5	175.2	182.2	189.5

POSITIONS:

FULL-TIME	-0-	2.0	2.0	2.0	2.0	2.0
PART-TIME						
TEMPORARY						

ANALYSIS : (Attach a separate page if necessary)

See Attached

Prepared by: Brant McGee Phone: 274-1684
Division: Office of Public Advocacy Date: 1/31/89

Approved by Commissioner: John Andrews Date: 2/1/89
Agency: Department of Administration

Distribution (by preparer):
Legislative Finance
Legislative Sponsor
Requestor
Office of Management and Budget
Impacted Agency(ies)

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CONTINUATION of FISCAL NOTE ANALYSIS

For Bill/Resolution No. SB 18

This bill will recriminalize the use or possession of marijuana at any location and would result in a significant increase in the number of prosecutions for such offenses.

The Department of Law has requested 2.5 attorneys in Anchorage and Fairbanks in order to enforce this statute. The constitutionality of the statute, which appears to directly conflict with the Supreme Court's 1975 holding in Raven v. State, will undoubtedly be tested in extensive trial and appellate court proceedings.

The Office of Public Advocacy requests one new Attorney III position for Anchorage -- where the greatest number of prosecutions is likely to arise -- and \$60,000 in contractual funds to pay for representation in other areas and for expert witness fees necessary for trial proceedings.

Personal Services

Anchorage

Attorney III
Salary & Benefits = \$66,457 \$ 66.5

Legal Secretary I
Salary & Benefits = \$32,833 32.8

Subtotal Personal Services \$ 99.3

Contractual

Contract attorneys in rural areas
and expert witnesses 60.0

Supplies

Stationary and library supplies
for two new positions 2.0

Equipment

Office furniture and equipment for one
professional position at \$3,635 and one
secretary position at \$7,369 = \$11,004 11.0

TOTAL: \$172.3

FEB 08 1989

FISCAL NOTE

REQUEST:

Revision Date: _____
Title: "An Act relating to marijuana;
and providing for an effective date."
Sponsor: Fischer, et. al.
Requestor: _____

Agency Affected: Health & Social Services
BRU: Alcohol and Drug Abuse Services
Components: Administration

EXPENDITURES/REVENUES: (Thousands of Dollars)

OPERATING	FY 89	FY 90	FY 91	FY 92	FY 93	FY 94
PERSONAL SERVICES					11	
TRAVEL						
CONTRACTUAL						
SUPPLIES						
EQUIPMENT						
LAND & STRUCTURES						
GRANTS, CLAIMS						
MISCELLANEOUS						
TOTAL OPERATING	0	0	0	0	0	0

CAPITAL	0	0	0	0	0	0
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REVENUE	0	0	0	0	0	0
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FUNDING: (Thousands of Dollars)

GENERAL FUND	0	0	0	0	0	0
FEDERAL FUNDS						
OTHER						
TOTAL	0	0	0	0	0	0

POSITIONS:

FULL-TIME	0	0	0	0	0	0
PART-TIME	0	0	0	0	0	0
TEMPORARY	0	0	0	0	0	0

ANALYSIS : (Attach a separate page if necessary)

Prepared by: *for Senate Member* Matthew C. Felix Phone: 586-6201
Division: Office of Alcoholism and Drug Abuse Date: 2/2/89
Approved by Commissioner: Myra M. Munson Date: 2/1/89
Agency: Health & Social Services

Distribution (by preparer):
Legislative Finance
Legislative Sponsor
Requestor
Office of Management and Budget
Impacted Agency(ies)

FISCAL NOTE

REQUEST:

Revision Date: _____
Title: An Act relating to marijuana
& providing for an effective date
Sponsor: Fischer, et al.
Requestor: _____

Agency Affected: Health & Social Services
BRU: Alcohol & Drug Abuse Services
Components: Administration

EXPENDITURES/REVENUES: (Thousands of Dollars)

OPERATING	FY 89	FY 90	FY 91	FY 92	FY 93	FY 94
PERSONAL SERVICES						
TRAVEL						
CONTRACTUAL						
SUPPLIES						
EQUIPMENT						
LAND & STRUCTURES						
GRANTS, CLAIMS						
MISCELLANEOUS						
TOTAL OPERATING	-0-	-0-	-0-	-0-	-0-	-0-

CAPITAL	-0-	-0-	-0-	-0-	-0-	-0-
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REVENUE	-0-	-0-	-0-	-0-	-0-	-0-
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FUNDING: (Thousands of Dollars)

GENERAL FUND	-0-	-0-	-0-	-0-	-0-	-0-
FEDERAL FUNDS						
OTHER						
TOTAL	-0-	-0-	-0-	-0-	-0-	-0-

POSITIONS:

FULL-TIME	-0-	-0-	-0-	-0-	-0-	-0-
PART-TIME	-0-	-0-	-0-	-0-	-0-	-0-
TEMPORARY	-0-	-0-	-0-	-0-	-0-	-0-

ANALYSIS : (Attach a separate page if necessary)

Prepared by: Matthew C. Felix *Matthew C. Felix*
Division: Office of Alcoholism & Drug Abuse
Approved by Commissioner: Myra M. Munson *Myra M. Munson*
Agency: Department of Health & Social Services

Phone: 586-6201

Date: 2-9-89

Date: 3-10-89

Distribution (by preparer):
Legislative Finance
Legislative Sponsor
Requestor
Office of Management and Budget
Impacted Agency(ies)

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MAR 13 1989

STATE OF ALASKA
1989 LEGISLATIVE SESSION

BILL VERSION: SB 18 (e)
PUBLISH DATE: 3/8/89

FISCAL NOTE

REQUEST:

Revision Date: _____
Title: Relating to marijuana

Agency Affected: Public Safety
BRU: Alaska State Troopers

Sponsor: Senator Fischer
Requestor: Senator Fischer

Component: Detachments, C.I.B.
and V.P.S.O.

EXPENDITURES/REVENUES: (Thousands of Dollars) (Inflation not included)

OPERATING	FY 89	FY 90	FY 91	FY 92	FY 93	FY 94
PERSONAL SERVICES						
TRAVEL						
CONTRACTUAL						
SUPPLIES						
EQUIPMENT						
LAND & STRUCTURES						
GRANTS, CLAIMS						
MISCELLANEOUS						
TOTAL OPERATING	-0-	-0-	-0-	-0-	-0-	-0-

CAPITAL	-0-	-0-	-0-	-0-	-0-	-0-
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REVENUE	-0-	-0-	-0-	-0-	-0-	-0-
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FUNDING: (Thousands of Dollars)

GENERAL FUND	-0-	-0-	-0-	-0-	-0-	-0-
FEDERAL FUNDS						
OTHER						
TOTAL	-0-	-0-	-0-	-0-	-0-	-0-

POSITIONS:

FULL-TIME	0	0	0	0	0	0
PART-TIME	0	0	0	0	0	0
TEMPORARY	0	0	0	0	0	0

ANALYSIS: (Attach a separate page if necessary)

It is anticipated that the majority of new criminal cases under this bill would arise from situations where a State Trooper contacts a person on another matter, and the use or possession of marijuana is discovered during the contact. For this reason, we believe the fiscal impact of these additional cases can be absorbed within existing resources.

Prepared by: Francis C. Allan
Division: Alaska State Troopers

Phone: 269-5691
Date: 2/1/89

Approved by Commissioner: SAH Arthur English
Agency: Department of Public Safety

Date: 2/1/89

STATE OF ALASKA
1989 LEGISLATIVE SESSION

BILL VERSION: CSSB 18 (Jud) (e)
PUBLISH DATE: 3/10/89

FISCAL NOTE

REQUEST:

Revision Date: 3/7/89
Title: Relating to marijuana

Agency Affected: Public Safety
BRU: Alaska State Troopers

Sponsor: Senator Fischer
Requestor: Senate Judiciary

Component: Detachments, C.I.B.
and V.P.S.O.

EXPENDITURES/REVENUES: (Thousands of Dollars) (Inflation not included)

OPERATING	FY 89	FY 90	FY 91	FY 92	FY 93	FY 94
PERSONAL SERVICES						
TRAVEL						
CONTRACTUAL						
SUPPLIES						
EQUIPMENT						
LAND & STRUCTURES						
GRANTS, CLAIMS						
MISCELLANEOUS						
TOTAL OPERATING	-0-	-0-	-0-	-0-	-0-	-0-

CAPITAL	-0-	-0-	-0-	-0-	-0-	-0-
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REVENUE	-0-	-0-	-0-	-0-	-0-	-0-
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FUNDING: (Thousands of Dollars)

GENERAL FUND	-0-	-0-	-0-	-0-	-0-	-0-
FEDERAL FUNDS						
OTHER						
TOTAL	-0-	-0-	-0-	-0-	-0-	-0-

POSITIONS:

FULL-TIME	0	0	0	0	0	0
PART-TIME	0	0	0	0	0	0
TEMPORARY	0	0	0	0	0	0

ANALYSIS: (Attach a separate page if necessary)

It is anticipated that the majority of new criminal cases under this bill would arise from situations where a State Trooper contacts a person on another matter, and the use or possession of marijuana is discovered during the contact. For this reason, we believe the fiscal impact of these additional cases can be absorbed within existing resources.

Prepared by: Francis C. Allan
Division: Alaska State Troopers

Phone: 269-5691
Date: 3/7/89

Approved by Commissioner: J.A.H. English
Agency: Department of Public Safety

Date: 3/7/89

Rec'd LFD 3/17/89

STATE OF ALASKA 1989 LEGISLATIVE SESSION
FISCAL NOTE

REQUEST: Bill Version: CS SB 18 (Judiciary)
 Publish Date: 3/8/89

Revision Date: 3/14/89 Agency Affected: Alaska Court System
 Title: An act relating to marijuana... BRU: Trial Courts

Sponsor: Fischer, Faiks, Kelly... Components:
 Requestor: Finance

EXPENDITURES/REVENUES:	(Thousands of Dollars)					
OPERATING	FY 89	FY 90	FY 91	FY 92	FY 93	FY 94
Personal Services		33.1	33.1	33.1	33.1	33.1
Travel						
Contractual						
Supplies						
Equipment		1.4				
Land & Structures						
Grants & Claims						
TOTAL OPERATING	0.0	34.5	33.1	33.1	33.1	33.1

CAPITAL						
---------	--	--	--	--	--	--

REVENUE						
---------	--	--	--	--	--	--

FUNDING:	(Thousands of Dollars)					
General Funds	0.0	34.5	33.1	33.1	33.1	33.1
Federal Funds						
Other						
TOTAL	0.0	34.5	33.1	33.1	33.1	33.1

POSITIONS:						
Full-time		1.0	1.0	1.0	1.0	1.0
Part-time						
Temporary						

ANALYSIS: (Attach a separate page if necessary)

See attached analysis.

Prepared by: *Jan Strandberg*
 Jan Strandberg, General Counsel Phone: 264-8228
 Division: Alaska Court System Date: 03/14/89

Approved by: *Stephanie Cole, for*
 Arthur H. Snowden, II, Administrative Director Date: 03/14/89
 Agency: Alaska Court System

- Distribution (by preparer):
- Legislative Finance
 - Legislative Sponsor
 - Requestor
 - Office of Management & Budget
 - Impacted Agency(ies)
 - Senate Secretary

Alaska Court System

CS SB 18

Fiscal Impact Analysis

Personal Services:

	<u>Salary</u>	<u>Benefits</u>	<u>Total</u>
Court Clerk II, range 10B, 12 months, PFT, Anchorage	\$22,836	\$10,308	\$33,144

Equipment: (one time costs)

Desk, chair, and typewriter 1,422

Total First Year Cost

\$34,566
=====

ALASKA COURT SYSTEM
SB 18 - ANALYSIS

The fiscal analysis submitted by the Department of Law anticipates a few hundred new cases if this bill is enacted into law. This figure does not include prosecution resulting from municipal enforcement efforts in the urban communities which can be expected to generate more arrests than would be made by state troopers.

Assuming 800 new cases statewide, it is anticipated that approximately half of them will be Anchorage cases. This increased caseload could be absorbed with existing judicial resources, but the addition of one clerk in Anchorage would be needed to process the volume of paperwork attributable to these new criminal offenses.

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- (Jua)
= 11

**STATE OF ALASKA 1989 LEGISLATIVE SESSION
FISCAL NOTE**

REQUEST:

Bill Version: SB 18
Publish Date:

Revision Date:
Title: An act relating to marijuana...

Agency Affected: Alaska Court System
BRU: Trial Courts

Sponsor: Fischer
Requestor: Fischer

Components:

EXPENDITURES/REVENUES:		(Thousands of Dollars)				
OPERATING	FY 89	FY 90	FY 91	FY 92	FY 93	FY 94
Personal Services	33.1	33.1	33.1	33.1	33.1
Travel
Contractual
Supplies
Equipment	1.4	. . . .	. . . .	. . . .	. . . .
Land & Structures
Grants & Claims
TOTAL OPERATING	0.0	34.5	33.1	33.1	33.1	33.1

CAPITAL
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REVENUE
----------------	---------	---------	---------	---------	---------	---------

FUNDING:		(Thousands of Dollars)				
General Funds	0.0	34.5	33.1	33.1	33.1	33.1
Federal Funds	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
Other	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
TOTAL	0.0	34.5	33.1	33.1	33.1	33.1

POSITIONS:						
Full-time	. . . .	1.0	1.0	1.0	1.0	1.0
Part-time	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
Temporary	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .

ANALYSIS: (Attach a separate page if necessary)

See attached analysis.

Prepared by: *Jan Strandberg*
Jan Strandberg, General Counsel
Division: Alaska Court System

Phone: 264-8228
Date: 02/08/89

Approved by: *Stephanie Cole, for*
Arthur H. Snowden, II, Administrative Director
Agency: Alaska Court System

Date: 02/08/89

- Distribution (by preparer):
- Legislative Finance
 - Legislative Sponsor
 - Requestor
 - Office of Management & Budget
 - Impacted Agency(ies)
 - Senate Secretary

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FEB 10 1989

LEGISLATIVE FINANCE

Court System - ORIGINAL Bill

2-8-89

Alaska Court System

SB 18

Fiscal Impact Analysis

Personal Services:

	<u>Salary</u>	<u>Benefits</u>	<u>Total</u>
Court Clerk II, range 10B, 12 months, PFT, Anchorage	\$22,836	\$10,308	\$33,144

Equipment: (one time costs)

Desk, chair, and typewriter

1,422

Total First Year Cost

\$34,566
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ALASKA COURT SYSTEM
SB 18 - ANALYSIS

The fiscal analysis submitted by the Department of Law anticipates a few hundred new cases if this bill is enacted into law. This figure does not include prosecution resulting from municipal enforcement efforts in the urban communities which can be expected to generate more arrests than would be made by state troopers.

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