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The Relationship Between Drug Use, Delinquency And Behavioral Adjustment Problems Among Committed Juvenile Offenders

A REPORT TO THE COLORADO ALCOHOL AND DRUG ABUSE DIVISION

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COLORADO DIVISION OF YOUTH SERVICES
Orlando L. Martinez, Director

EXECUTIVE SUMMARY

INTRODUCTION

In response to the lack of readily available and quantifiable information on the client population, the Division of Youth Services (DYS) developed a survey instrument which could be used to provide descriptive information in regard to drug and alcohol use, delinquency involvement, physical and sexual abuse, and sexual perpetration of the population of juvenile offenders committed to the Division. The survey consists of two self-report instruments: The Drug Use Survey (DUS) with 188 items, and the Community and Personality Survey (CPS) with 273 items. The survey instruments incorporate items, definitions, and areas of concern from several nationally recognized surveys and assessment instruments including the NIDA National Survey on Drug Abuse (Fishburne, Abelson, and Cisin, 1980); The American Humane Association's National Incidence Study (1981), Elliot et al.'s Self Reported Delinquency Scale (1983); Finkelhor's sexual abuse scale (1979); and Straus et al. (1980) and Gelles (1979) child abuse measures in a manner similar to that used by Dembo et al. (1985). In addition, items on the youth as perpetrator of sexual offenses were developed. The research was also designed to assist in the development of an initial assessment instrument.

The sample for this study included all juveniles in residence at the five DYS institutional facilities (with an average daily population of 370). These juveniles are among the most serious youthful offenders, having been committed to the Division by one of the 22 District Courts in the State of Colorado.

An attempt was made to survey all of these individuals. Although all residents were included, individuals who were sick,, on a home visit, or off grounds in a work program were not surveyed. A total of 303 youths were the basis of this study. The sample was distributed among the five facilities as follows: Closed Adolescent Treatment Center 24, Lookout Mountain School 140, Mt. View School 58, Golden Gate Youth Camp 44, and Lathrop Park Youth Camp 37.

THE DRUG USE SURVEY

The Drug Use Survey presents a series of questions on various substance types including marijuana, alcohol, hallucinogens, cocaine, heroin, stimulants, sedatives, tranquilizers, painkillers and inhalants. The survey asked if the youths had ever tried the substances and had they used them in the month prior to commitment.

PREVALENCE OF DRUG USE		
Percent		
Substance	Ever Used	Used Month Before Commitment
Marijuana	95.0	82.1
Alcohol	94.7	76.5
Hallucinogens	68.7	46.0
Stimulants	67.1	45.6
Cocaine	63.6	39.6
Inhalants	56.2	19.8
Painkillers	41.9	21.8
Sedatives	39.4	21.3
Tranquilizers	35.3	15.8
Heroin	13.4	6.7

It was found that the extent of drug use among DYS clients is great. The most commonly tried substances of this group are marijuana and alcohol. Heroin is the least tried substance in the survey group. The percentage of youths who actually used the substance in the month prior to commitment follows the same pattern, with marijuana and

alcohol being the most prevalent, followed by hallucinogens and stimulants. Again, heroin was the least used drug.

The youths in the DYS study group were compared to the youths sampled by the 1982 National Institute on Drug Abuse (NIDA) report (Miller et al., 1983). The NIDA report separates its sample by age with 12 to 17 year olds in one group and 18 to 25 year olds in another. The DYS study group ranges in age from 12 to 21 and is compared to both age groups in the NIDA sample.

COMPARISON OF THE DYS SAMPLE TO THE NIDA SAMPLE
BY AGE GROUP

Age 12-17 Years

Substance	<u>DYS SAMPLE</u> N = 232		<u>NIDA SAMPLE</u> N = 1581	
	Percent Ever Used	Percent Used Month Prior to Commit	Percent Ever Used	Percent Used Month Prior to Survey
Marijuana	94.8	83.6	26.7	11.5
Alcohol	93.9	75.4	65.2	26.9
Hallucinogens	66.8	45.8	5.2	1.4
Stimulants	66.2	45.8	6.7	2.6
Cocaine	62.3	39.3	6.5	1.6
Inhalants	56.8	21.7	a	a
Painkillers	39.6	20.6	4.2	0.7
Sedatives	39.0	21.1	5.8	1.3
Tranquilizers	33.5	17.0	4.9	0.9
Heroin	11.7	4.8	b	b

(Continued next page)

Age 18-25 Years

Substance	<u>DYS SAMPLE</u>		<u>NIDA SAMPLE</u>	
	N = 71		N = 1283	
	Percent Ever Used	Percent Used Month Prior to Commitment	Percent Ever Used	Percent Used Month Prior to Survey
Marijuana	95.8	77.3	64.1	27.4
Alcohol	97.1	81.2	94.6	67.9
Hallucinogens	74.6	46.5	21.1	1.7
Stimulants	70.0	45.1	18.0	4.7
Cocaine	67.6	41.4	28.3	6.8
Inhalants	54.3	17.1	a	a
Painkillers	49.3	25.7	12.1	1.0
Sedatives	40.8	21.7	18.7	2.6
Tranquilizers	41.4	14.3	15.1	1.6
Heroin	19.1	12.9	1.2	b

a Not included in survey.

b Less than .5%.

The comparison between the current study group and the NIDA sample group shows a striking difference for all substances. The institutionalized group reported having tried every substance in much higher proportions than the sample from the general population. In fact, the only substance which was not at least three times as prevalent in the institutionalized group was alcohol.

The survey asked if the respondent ever had a chance to try the various substances. Although having an opportunity to use a substance does not necessarily mean it will be tried, a low percentage of the cases that had a chance to try the drug never did. The exception to this was heroin and inhalants, where 20.9 percent and 15.7 percent respectively, had an opportunity but never did use them.

OPPORTUNITY FOR USE

Substance	Chance to Use	Percent Ever Used	Had Chance But Never Used
Marijuana	96.7	95.0	1.7
Alcohol	96.7	94.7	2.0
Hallucinogens	73.9	68.7	5.2
Stimulants	70.0	67.1	2.9
Cocaine	71.3	63.6	7.7
Inhalants	71.9	56.2	15.7
Painkillers	50.2	41.9	8.3
Sedatives	50.8	39.4	11.4
Tranquilizers	42.9	35.3	7.6
Heroin	34.3	13.4	20.9

The number of times the respondent reported that he or she had ever used each drug also is presented. The substance most frequently reported used was marijuana, where 67.7 percent said they had used it 100 or more times. In keeping with prior findings, heroin was the substance reported least used.

LIFETIME INCIDENCE OF DRUG USE

Substance	Percent Times Used				
	Never Used	1-2X	3-10X	11-99X	100 or More
Marijuana	5.0	3.7	4.7	15.0	67.7
Alcohol	5.3	7.6	15.2	27.0	39.4
Hallucinogens	31.3	10.6	19.2	22.0	16.7
Stimulants	32.9	5.3	17.8	18.7	23.9
Cocaine	36.4	19.8	21.5	15.1	6.9
Inhalants	43.8	14.2	14.8	13.8	11.3
Painkillers	58.1	7.6	9.7	15.1	8.9
Sedatives	60.6	9.0	10.6	13.7	5.5
Tranquilizers	64.7	8.8	11.2	10.3	4.0
Heroin	86.6	6.3	3.3	1.6	0.7

COMMUNITY AND PERSONALITY SURVEY

Items in the Community and Personality Survey were organized into several domains to facilitate analysis. Among the domains are delinquency, school adjustment, psychological adjustment, physical and sexual abuse, and sexual perpetration.

Delinquency

The delinquent behavior items were grouped into general delinquency scales comprised of five distinct types of delinquency. The five types are petty theft, serious theft, violent delinquency, mischief, and sexual assault. Prevalence rates for the items in the delinquency domain show that the percentage of youths who had committed any of the delinquent activities ranges from 15.3 percent (forced sexual relations) to 96.2 percent (been in a fight). The second most common behavior is "hit other student" with 90.3 percent. The lowest percentages were found in the sexual deviance questions.

DELINQUENCY ITEMS

Item	Percent Acknowledging Behavior	Mean Number of Incidents
<u>Petty Theft:</u>		
39. Shoplifted	87.8	133.55
29. Stole Worth \$5 - \$50	77.1	63.59
28. Evaded Payment	73.5	55.49
22. Stole Worth \$5 or Less	66.9	64.35
23. Stole From Parents	63.5	24.56
26. Fraudulent Selling	58.3	40.64
30. Stole at School	55.4	25.79
27. Strongarmed Others	43.4	20.73
<u>Serious Theft:</u>		
44. Stole Worth \$50 or More	86.0	84.52
37. Stole From Vehicle	82.6	99.31
40. Stole Vehicle	68.3	33.92
36. Broke Into Buildings	56.5	25.01
35. Broke Into Homes	54.0	58.93
53. Used Weapon	48.7	26.84
<u>Violent Delinquent:</u>		
46. Been in Fight	96.2	121.38
51. Seriously Hurt Person	66.9	18.50
52. Threatened to Kill	65.2	46.31
56. Hit Adult	60.9	29.17
50. Been in Gang Fight	53.4	38.95
59. Attacked to Kill-Agg. Assault	49.0	28.95
43. High Speed Police Chase	39.3	3.64
<u>Sexual Assault:</u>		
239. Thought About Forced Sex	23.5	16.23
237. Forced Kiss	17.5	1.42
236. Sexual Activity With a Child	17.1	2.34
270. Charged With Sexual Assault	15.4	0.18
241. Forced Sexual Relations	15.3	4.36
<u>Mischief:</u>		
61. Trespassed	83.5	117.68
41. Stole Bicycle	78.8	33.11
24. Disorderly Conduct	59.5	42.27
33. Damaged School Property	50.7	6.94
31. Obscene Phone Calls	49.5	36.30
<u>Miscellaneous Delinquency Items:</u>		
58. Hit Other Student	90.3	89.88
45. Bought Stolen Goods	77.8	75.80
63. Sold Marijuana	72.4	172.27
60. Carried Hidden Weapon	72.2	129.33
34. Damaged Other Property	69.9	32.90
54. Arson	46.3	8.00
64. Sold Hard Drugs	35.6	70.08

The delinquency prevalence rates of the DYS sample were compared to the general juvenile population as reported by the National Youth Survey (NYS) (Elliott et al., 1983).

COMPARISON OF PREVALENCE RATES FOR THE NYS SAMPLE AND THE DYS SAMPLE.
Percent of respondents reporting each delinquent behavior

Item	NYS Sample N = 1494	DYS Sample N = 303	
	Past Year	Year Before Commit.	Ever.
32. Damaged Family Property	6	20.7	31.1
33. Damaged School Property	7	28.8	50.7
34. Damaged Other Property	10	54.6	69.9
40. Stole Vehicle	1	48.0	68.3
44. Stole Worth \$50 or More	3	65.9	86.0
45. Bought Stolen Goods	6	59.4	77.8
47. Thrown Objects	19	45.5	67.9
6. Runaway	4	42.1	60.8
21. Lied About Age	27	60.9	69.1
60. Carried Hidden Weapon	7	61.1	72.2
22. Stole Worth \$5 or Less	10	51.7	66.9
59. Attacked to Kill - Agg. Assault	5	38.4	49.0
50. Gang Fights	6	37.7	53.4
63. Sold Marijuana	10	64.9	72.4
73. Cheated on School Test	29	40.1	70.3
25. Hitchhiked	7	36.2	50.2
23. Stole From Parents	5	40.5	63.5
56. Hit Adult	4	40.0	60.9
57. Hit Parent	3	14.7	29.7
58. Hit Other Student	19	64.7	90.3
24. Disorderly Conduct	28	50.6	59.5
64. Sold Hard Drugs	2	31.6	35.6
65. Joyriding	6	48.9	70.2
28. Evaded Payment	16	58.5	73.5
29. Stole Worth \$5 to \$50	4	62.5	77.1
30. Stole at School	3	32.1	55.4
38. Broke into Building	2	10.0	17.9
74. Skipped Classes	42	62.5	94.7
75. Suspension	9	43.2	87.1
31. Obscene Phone Calls	4	30.1	49.5
62. Used Checks Illegally	1	15.1	22.5
26. Fraud	4	44.8	58.3
54. Arson	1	21.9	46.3

It is apparent from the table that individuals in the DYS institutional sample are more likely to have committed every offense than individuals in the NYS non-institutionalized sample. The prevalence rates for the DYS population are up to ten times higher than the NYS sample for the less serious offenses, and even greater for serious offenses. The most commonly reported behaviors for the NYS sample include "skipped classes", "cheated on test," "disorderly conduct," and "lied about age." However, the most frequently reported behavior for the DYS group was "stole worth \$50 or more," "sold marijuana," and "hit other student."

Delinquency incidence rates also were compared for the two samples. As with the prevalence rates, the DYS sample reported much higher incidence rates for both minor and serious offenses. For example, each juvenile committed to the DYS reported having broken into a building or vehicle an average of 27 times in the year before commitment. This compares to an average of .08 times per year for juveniles in the general population. Likewise, the DYS sample reported a yearly average of 39 felony thefts and 101 acts of selling marijuana while the national averages were .11 and 3.25 respectively. Thus, it is apparent that the institutionalized population is not only more likely to have committed a variety of offenses, but they also reported committing a much greater volume of offenses.

COMPARISONS OF INCIDENCE RATES FOR THE NYS SAMPLE AND THE DYS SAMPLE

Item	DYS SAMPLE N = 303		NYS SAMPLE N = 1494	
	Mean	SD	Mean	SD
32. Damaged Family Prop.	1.02	3.38	.18	1.06
33. Damaged School Prop.	2.90	11.62	.18	1.00
34. Damaged Other Prop.	9.54	39.12	.29	1.76
40. Stole Motor Vehicle	9.99	59.47	.02	.21
44. Stole Worth \$50 or More	38.93	141.53	.11	1.06
45. Bought Stolen Goods	41.45	145.04	.22	1.98
47. Thrown Objects	29.96	148.97	1.43	8.16
6. Runaway	2.86	9.88	.06	.35
21. Lied About Age	25.26	91.92	3.73	18.41
60. Carried Hidden Weapon	69.35	159.61	4.26	34.95
22. Stole Worth \$5 or Less	28.47	107.81	.53	3.26
59. Attack to Kill-Agg Ass	11.11	68.57	.14	1.01
50. Gang Fights	21.07	100.23	.14	.99
63. Sold Marijuana	101.16	229.03	3.25	32.71
73. Cheated on School Test	19.64	101.66	1.53	5.74
25. Hitchhiked	11.57	78.12	1.31	19.79
23. Stole From Family	8.29	57.79	.38	7.52
56. Hit Teacher/Adult	9.41	63.03	.07	.47
57. Hit Parent	.55	2.68	.09	.84
58. Hit Other Student	43.37	147.94	1.04	15.73
24. Disorderly Conduct	16.72	71.69	2.62	16.85
64. Sold Hard Drugs	46.11	167.93	1.22	27.46
65. Joyriding	16.95	95.19	.34	7.81
241. Sexual Assault	4.36	52.16	.01	.15
28. Evaded Payment	29.86	113.27	.94	6.70
29. Stole Something \$5-50	24.20	100.37	.22	2.23
30. Stole at School	7.96	56.34	.08	.69
35-37. Broke into Bldg/Veh	27.45	129.89	.08	.92
74. Skipped Classes	67.83	160.76	5.97	24.26
75. Suspension	7.10	54.07	.20	.94
31. Obscene Phone Calls	14.56	89.48	.26	4.12
62. Used Checks Illegally	.94	5.80	.04	.58
26. Fraud	14.35	64.65	.59	10.35
54. Arson	4.58	43.05	.01	.14

School Adjustment

The school adjustment domain shows that nearly all of the youths, 94.7 percent, reported cutting classes in the past. Over half, 52.9 percent, reported being expelled from school and 8.7 percent reported being suspended. However, when asked if they would attend school if not committed, a surprising 63.1 percent responded "yes." An additional 16.8 percent responded "probably not," and the remaining 20.1 percent responded "no."

Psychological Adjustment

The psychological items were broken down into four separate scales: anxiety and depression, self-destructiveness, psychotic symptoms, and psychological and drug treatment.

PSYCHOLOGICAL ADJUSTMENT DOMAIN

Item	Percent Yes
<u>Anxiety and Depression Scale:</u>	
81. Tense	90.1
82. Depressed	87.1
86. Worried A lot	86.8
84. Slept Poorly	70.9
90. Nervous Habits	69.3
89. Bad Dreams	67.7
83. Poor Appetite	57.1
<u>Self Destructiveness Scale:</u>	
94. Thought About Suicide	48.3
92. Cut Self	41.4
95. Tried Suicide	25.7
96. Feel Like Suicide Now	5.1
<u>Psychotic Symptoms Scale:</u>	
91. Heard Voices	30.6
93. Seen Things	28.4
<u>Psychological and Drug Treatment Scale:</u>	
97. Gone to Counselor with Family	61.0
98. Gone to Counselor Alone	50.0
99. In Hospital for Emotional Problems	23.6
100. In Hospital for Drug/Alcohol Treatment	19.2
<u>Miscellaneous Psychological Item:</u>	
88. Paranoid	68.4

The data show that over 70 percent of the youths had periods where they slept poorly (70.9%), were depressed (87.1%), worried a lot (86.8%), or were tense (90.1%). Nearly half, 48.3 percent, had thought about suicide and 25.7 percent had actually tried to commit suicide. Further, 5.1 percent reported they feel like hurting themselves or taking their lives now. Half of the youths reported going to a counselor or therapist alone, and 61.0 percent reported going with their families. Just under one quarter, 23.6 percent, reported being hospitalized for emotional problems, and 19.2 percent reported being hospitalized for drug or alcohol treatment.

Physical and Sexual Abuse

The majority of the respondents, 55.6 percent, said they had been threatened with hitting, and 87.6 percent reported they had been spanked. However, 29.1 percent reported being hit with a hard object such as a stick or club, and 42.2 percent that they had been punished to the point they were left with marks.

FAMILY VIOLENCE AND DYSFUNCTION SCALE		.
Item	Percent	
	Yes	.
130. Parents Spanked You	87.6	
129. Parents Threatened to Hit You	55.6	
131. Parents Hurt or Left Marks	42.2	
123. Fighting in Home	40.1	
144. Hit With Hard Object	29.1	
127. Parents Refused to Let You In	13.6	
128. Parents Locked You in Closet	10.0	

The American Humane Association classifies physical abuse along a wide range of acts from refusing to give a child dinner before going to bed, to locking a child out of the house, spanking, and beating the child. Since this comprises a rather broad definition of abuse

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encompassing a large percentage of the youths in this society, an operational definition which presents three levels of abuse was developed for this study. Level one includes all items of the Humane Association. Level two excludes refusing dinner before bed, threatening to hit, spanking, hurt or left marks, beat with hands or fists, hit with strap, had bruises, had welts, and had cuts. Level three is limited to hurt with a knife or gun, scalded or burned, held under water, broken bones, knocked out, required medical treatment, or required hospitalization.

The occurrence of the three levels of abuse among the DYS population is presented below. All of the youths responding to the questions measuring level one, the most inclusive definition, experienced some abuse. Using the more restrictive definition 58.9 percent experienced abuse. Using the most severe definition, which was limited to major physical harm, 36.5 percent of the population experienced severe abuse. In contrast, it is estimated that in the general population only about one percent of young people are abused or neglected (Cunningham, 1983).

LEVELS OF REPORTED PHYSICAL ABUSE

Youths Reporting Abuse by:	Number	Percent
Level 1 (all inclusive)	278	100.0
Level 2 (moderate and severe)	172	58.9
Level 3 (severe)	96	36.5

The prevalence of physical abuse in the DYS committed sample was compared to a sample of detained juveniles in Florida reported by Dembo and his associates (1985). Dembo found generally higher rates of abuse in his sample. These results may be due to an actual

appeared in court, 30 reported they had attempted or actually used force, and the remainder reported fondling children.

A total of 30 juveniles in this sample were committed to DYS for sexual assault and one for incest. Of these, 27 acknowledged sexual offending behavior and four did not. Of the remaining 53 juveniles whose behavior defines them as sex offenders, most were committed for burglary (11), theft (13), assault (10), or trespassing (6).

It appears that a sexual charge at commitment is an accurate identifier of only 40 percent of the juveniles who admitted to engaging in sexual assaultive behavior. Prior court appearances identify 58 percent (but with 11 percent denying such behavior). Thus, DYS has in its population more than twice as many sexual offenders as official records indicate. However, it must be noted that of those juveniles who admitted to fondling children, 36.0 percent reported doing so only once or twice, while those who forced or tried to force sexual relations, 52.2 percent had forced sexual relations only once or twice.

SEXUAL OFFENDERS			
Offense	Number	Percent	Number Not Reporting
Fondled Younger Children	50	17.1	11
Tried Forced Sexual Relations	45	15.3	11
Total Number of Juveniles	79	27.1	11
Number to Court for: Sexual Assault	46	15.4	
Number Committed for: Sexual Assault	30	9.9	
Incest	1	0.3	

MULTIVARIATE ANALYSES

Ethnic and Regional Differences

An analysis of variance was performed to examine differences in selected scale scores among ethnic groups and among DYS administrative regions. Comparing ethnic differences, Anglos scored highest on most drug scales, followed by Hispanics and then Blacks. This trend holds for all of the extent of use scales for each of the eleven specific drug categories. Mean scores for Blacks on these scales were significantly lower than the mean scores for both the Anglos and Hispanics on all but the marijuana and heroin scales. The latter two scales show no differences because the prevalence rate for marijuana use is close to 100 percent for all groups while heroin use prevalence rates were very low.

COMPARISON OF DRUG USE SCALES ACROSS ETHNIC GROUPS

Scales	Anglo N=145)		Black (N=46)		Hispanic (N=110)		F
	Mean	SD	Mean	SD	Mean	SD	
1. Alcohol use	12.58	4.31	9.32	4.57	11.60	4.35	9.80**
2. Marijuana use	16.06	6.62	15.23	6.50	16.15	6.23	.35
3. Cocaine use	8.88	7.29	5.61	6.51	7.45	7.23	3.95*
4. Amphetamine use	11.42	7.57	3.56	6.69	9.27	7.57	9.54**
5. Hallucinogens use	11.11	7.94	3.77	6.29	11.47	6.36	17.72**
6. Inhalant use	7.35	6.79	2.58	4.52	7.13	7.02	9.87**
7. Heroin use	1.39	3.20	.20	1.33	1.03	3.06	2.86
8. Pain killers	5.96	6.27	1.85	4.46	3.82	5.66	10.13**
9. Sedatives	5.87	6.33	1.54	3.98	3.94	5.85	10.39**
10. Tranquilizers	4.44	5.31	1.11	3.70	3.10	5.14	8.02**
11. Methods of use	5.25	2.03	3.53	2.00	4.65	2.16	12.34**
12. Sustained use	13.39	7.63	12.76	8.63	12.13	7.72	.82
13. Use to mang prob	7.54	5.60	4.26	5.24	6.14	5.68	6.45**
14. Social benefit	4.13	3.71	3.07	2.90	3.20	3.15	3.05*
15. Mental benefit	8.56	4.34	7.02	4.75	7.01	4.61	4.11*
16. Psychophys disrupt.	10.88	8.09	5.30	5.61	7.64	7.44	11.79**
17. Emotional disrupt.	3.66	4.07	1.66	2.90	3.47	4.12	4.71**
18. Loss Behav control	5.69	4.66	5.11	4.32	6.05	5.03	.64
19. Soc role disrupt	5.88	4.38	5.84	4.56	6.19	4.56	.17
A. Acknowledgment	14.04	6.48	7.91	4.38	11.56	6.20	18.27**
B. General Benefit	20.23	10.84	14.36	10.13	16.36	11.08	6.93**
C. General Disruption	37.67	25.01	24.72	19.75	32.85	24.83	5.16**
D. Gen Extent of Use	85.07	46.63	44.76	31.30	74.97	43.98	14.89**

* p < .05.

** p < .01

A similar trend is found in the other scales of the DUS for which there were significant differences. Anglos and Hispanics scored higher than Blacks on the general disruption, the general extent, and general benefits of drug use scales. These findings indicated that Anglos (and possibly Hispanics) appear to have greater involvement in the use of drugs and reported experiencing greater disruption from the use of drugs than Blacks. These findings are consistent with those of the National Youth Survey (Elliott et al., 1983) which reported that Black juveniles in the general population have significantly lower prevalence and incidence of drug use rates than do Anglos. Rates for Hispanics generally fell between those of Anglos and Blacks.

Also presented are comparisons of the CPS scales across the three ethnic groups. For the scales of serious theft, acts of violence, sexual assault, and school deviance, the three groups did not differ significantly. Anglos had higher scores on the petty theft and mischievous acts scales. Mean scores on the overall general delinquency scale and on scales measuring specific patterns of serious theft, violent crimes, and sexual offense crimes, did not differ significantly across the three groups.

COMPARISON COMMUNITY ADJUSTMENT SCALES ACROSS ETHNIC GROUPS								
Scales	Anglo N=145)		Black (N=46)		Hispanic (N=110)		F	
	Mean	SD	Mean	SD	Mean	SD		
1. Petty theft	18.91	10.21	14.37	10.51	14.23	10.31	7.65**	
2. Mischievous acts	12.40	7.34	10.16	6.86	10.48	6.80	3.07*	
3. Serious theft	13.04	8.75	12.22	8.53	13.12	8.17	.20	
4. Acts of violence	12.73	8.61	15.81	10.37	14.31	9.91	2.16	
5. Sexual assault	3.35	5.82	2.07	4.01	2.86	4.95	1.07	
6. Criminal intent	5.94	2.16	7.07	7.57	6.03	2.54	4.21*	
7. Peer dependent	3.41	1.73	3.17	2.00	3.44	2.02	.38	
8. School deviance	10.04	4.05	8.95	4.81	9.40	4.48	1.38	
9. School dislike	3.24	1.93	2.47	1.70	2.97	1.85	3.09*	
10. Birth Fa absent	3.89	2.01	3.87	1.74	3.70	1.76	.36	
11. Birth Mo absent	2.20	1.84	2.07	1.58	2.17	1.62	.09	
12. Family violence	14.17	8.29	9.62	6.40	9.81	7.00	12.79**	
13. Fam Physical abuse	3.82	3.71	2.22	3.39	2.87	3.28	4.49*	
14. Phys abuse stranger	.68	1.06	.66	1.17	.95	1.39	1.80	
15. Sex abuse specific	9.04	8.19	10.70	6.29	8.96	8.33	.46	
16. Sex abuse general	.26	.77	.27	.77	.28	.89	.01	
17. Anxiety/depression	9.58	5.12	8.61	5.33	9.55	4.97	.68	
18. Suicidal	2.59	2.75	.92	1.95	1.78	2.36	8.64**	
19. Psycho-like	2.24	1.85	1.72	1.46	1.78	1.34	3.29*	
20. Sex activity	6.23	2.05	6.53	1.60	5.92	1.87	1.81	
21. Sex attitudes	.09	.37	.13	.40	.14	.42	.49	
22. Adult alienation	3.44	2.09	2.59	2.08	2.70	1.88	5.65**	
23. Prior treatment	5.39	4.13	2.48	3.47	2.18	2.77	31.96**	
A. Gen Mental Health	15.42	8.27	12.45	8.27	14.30	7.54	2.51	
B. Gen delinquency	71.61	36.32	62.99	37.68	65.13	37.72	1.43	

* p < .05

** p < .01

With respect to nondelinquent patterns, Anglo youths reported a higher degree of family violence and abuse than either Blacks or Hispanics. Also, Anglos reported a more extensive history of involvement in suicidal thinking and gestures and psychotic-like experiences. Yet, the general mental health problems scale did not differentiate across the three ethnic groups at a statistically significant level.

When regional comparisons were made, the scores on the sexual assault and drug use scales were not significantly different. On the general delinquency scale, juveniles from the Southern Region demonstrated the lowest score, while juveniles from the Central Region scored highest. Denver and Northern Region juveniles scored higher than average on the delinquency scale.

MEAN SCORES ON SELECTED SCALES
BY REGION

		Sexual Assault Scale 5	General Delinquency Scale A	Extent of Drug Use Scale D
	N	Mean = 2.6	Mean = 68.1	Mean = 75.3
Western	27	2.4	66.1	79.0
Central	58	2.8	74.0	83.2
Denver	100	2.0	71.6	69.4
Northern	56	3.3	70.2	80.5
Southern	62	2.8	56.0	71.0
Significance Level		N.S.	p < .05	N.S.

Cross Domain Analysis

Correlations between scales developed in this study were analyzed. Among the delinquency and drug use scales there were high positive correlations between delinquency and extent of drug use and the general disruptions that come from drug use. At the more specific

delinquency level, petty theft, mischievous acts, serious theft, and violent acts had high correlations with the extent of disruptions from drug use. The sexual assault scale was not significantly correlated with the general drug acknowledgment or the extent of use scale. The school truancy scale had high significant correlations with all of the general drug use scales. This suggests that drug use in this population has a significant relationship with behaviors that detract from a successful response to school.

CORRELATIONS BETWEEN GENERAL DRUG USE SCALES AND
THE DELINQUENCY SCALES *

		Delinquency Scales								
Drug Scale		1 Pet thft	2 Mis acs	3 Ser thft	4 Vio acts	5 Sex aslt	6 Cri int	7 Peer infl	8 Schl tru	B Gen del
1.	Alcohol	30	25	28	27	08	12	-06	28	35
2.	Marijuana	28	31	14	31	02	11	-07	34	38
3.	Cocaine	31	30	41	35	00	13	-14	38	44
4.	Amphetamine	35	36	37	28	08	13	00	41	43
5.	Hallucinogens	31	31	38	29	07	06	-01	35	40
6.	Inhalants	30	29	17	14	24	03	02	17	29
7.	Heroin	12	15	29	28	12	01	-06	15	24
8.	Painkillers	39	35	35	34	20	08	-09	37	43
9.	Sedatives	32	30	30	29	07	10	-01	32	36
10.	Tranquilizers	40	34	32	32	22	04	-09	28	43
11.	Use methods	35	34	33	29	15	13	-09	35	43
12.	Sustained Use	40	37	36	34	20	07	-12	43	46
13.	Emotional benefits	27	22	10	13	32	06	07	21	24
14.	Social benefits	25	21	-05	09	35	-04	16	17	20
15.	Mental benefits	35	35	27	26	19	10	-05	37	38
16.	Psychphs. disrption	43	41	32	29	25	12	-03	41	46
17.	Emotional disrption	24	24	15	08	28	04	10	19	28
18.	Control loss	42	40	35	47	25	06	-05	38	50
19.	Social role	29	31	35	30	13	14	-03	35	38
A.	Acknowledgement	42	39	38	30	13	09	-05	43	47
B.	General extent	43	41	44	39	15	11	-07	43	53
C.	General benefit	36	33	18	21	35	00	07	31	34
D.	General disrupt	48	46	43	40	24	11	-05	47	54

* p < .01 for correlations greater than .21

Almost all of the specific drug types had high correlations with the petty theft, mischievous acts, serious theft, and violent acts scales. The sexual assault scale had essentially zero correlations with all the drug types except for the inhalants and tranquilizers. Important is the finding that the violent acts scale had a high correlation with the scale measuring the loss of behavior control when using drugs. All drug types had significant correlations with the violent acts scale with the exception of inhalants.

The stylistic patterns (criminal intent and peer influence) were uncorrelated across all scales. This suggests that the manner in which delinquents get involved in crime is independent of drug use patterns.

At the general level, family violence and physical abuse were significantly correlated with the extent of drug use, general benefits, and general drug use disruption scales. Persons who were seriously physically abused as children had a higher probability of using drugs extensively, and of developing problems associated with that use. These correlations were not as strong for the sexual abuse victims.

At the more specific drug use disruption level, individuals who reported coming from physically abusive families and those who reported being sexually abused were more apt to have psychophysical disruptions and behavioral control loss associated with the use of drugs. At the level of specific types of drugs, youths from physically abusive homes were more apt to use amphetamines,

hallucinogens, painkillers, and tranquilizers. Youths who had been sexually abused were more apt to use cocaine, hallucinogens, heroin, and tranquilizers.

CORRELATIONS BETWEEN GENERAL DRUG USE SCALES AND THE
FAMILY DYSFUNCTION AND ABUSE SCALES

Item	Primary Abuse Scales			
	12 Family Dysfun and Abuse	13 Family Physical Abuse	15 Victim Sexual Abuse Specific	16 Victim Sexual Abuse General
1. Alcohol	30	19	22	11
2. Marijuana	18	20	19	12
3. Cocaine	18	20	32	14
4. Amphetamines	30	31	20	21
5. Hallucinogens	19	24	25	19
6. Inhalants	21	15	08	22
7. Heroin	15	18	27	23
8. Painkillers	32	24	28	18
9. Sedatives	23	22	19	12
10. Tranquilizers	30	28	33	27
11. Use methods	26	26	24	15
12. Sustained use	23	23	15	12
13. Problems benefit	34	25	13	12
14. Social benefit	22	23	08	18
15. Mental benefit	25	25	11	01
16. Psychophysical disruption	34	30	25	24
17. Emotional disruption	15	13	15	20
18. Control loss	31	29	25	24
19. Social role	14	15	14	10
A. Acknowledgement	27	27	26	15
B. General extent	32	30	31	24
C. General benefits	35	32	13	12
D. General disruption	36	34	29	24

$p < .01$ for correlations greater than .21.

The study indicated a strong relationship between mental health problems and drug use and abuse. The extent of drug use, the benefits of use, and the disruptions of use were all highly correlated with psychological problems. At the general level, the correlation between disruption and psychological problems was strong. Specifically, youths using alcohol, amphetamines, hallucinogens, inhalants,

painkillers, and tranquilizers reported more mental health problems. The marijuana scale had zero correlation with the physiological scales (except for the sexually active scale). Youths with a history of suicidal behavior or thinking were extensively involved in most of the drug types except for marijuana, cocaine, and heroin. Generally, there was a significant interaction between drug use and psychological problems.

CORRELATIONS BETWEEN GENERAL DRUG USE SCALES
AND THE PSYCHOLOGICAL SCALES

Item	Psychological Scales							
	17 Anx iety	18 Sui- cide	19 Psycho- tic sx	20 Sex act	21 Sex att	22 Reject adult	23 Treat- ment	A Gen Psyc
1. Alcohol	22	21	11	24	08	10	16	24
2. Marijuana	12	18	03	32	08	18	08	15
3. Cocaine	14	19	11	33	10	19	08	18
4. Amphetamines	32	32	15	19	04	29	18	36
5. Hallucinogens	22	25	10	28	04	15	19	26
6. Inhalants	23	24	17	14	-09	15	17	27
7. Heroin	15	19	09	10	02	10	07	18
8. Painkillers	24	34	19	28	04	14	28	31
9. Sedatives	19	23	15	24	07	14	24	23
10. Tranquilizers	22	31	22	34	-01	16	34	30
11. Use methods	24	26	17	31	00	18	19	29
12. Sustained use	24	27	20	23	00	17	16	30
13. Emotional benefit	44	37	25	13	-07	06	19	48
14. Social benefit	37	17	20	09	-05	02	08	37
15. Mental benefit	31	19	21	21	00	13	13	32
16. Psychoph disrption	40	36	35	30	04	12	30	47
17. Emotional disrption	42	29	16	14	06	00	16	42
18. Control loss	34	29	27	30	07	08	09	40
19. Social role disrpt.	29	17	11	21	12	11	06	29
A. Acknowledgement	24	29	20	33	03	21	28	30
B. General extent	28	33	18	33	05	23	25	34
C. General benefits	47	33	27	18	-05	10	18	49
D. General disruption	38	37	25	34	04	21	25	45

$p < .01$ for correlations greater than .21.

Regression Analysis

A multiple regression technique was used to determine what combination of scales best predict either general delinquency or specific delinquency patterns. The general extent of use scale from the DUS was selected to represent the domain of drug use. From the community adjustment domain the following scales were used; general mental health, peer-dependence, family disruption, criminal intent, school dislike, sexual abuse, and specific family physical abuse. Three criterion scales were chosen; the general delinquency, sexual assault, and physical violence.

The analysis showed that using the above eight predictor scales, family disruption and violence and extent of drug use provided the best linear combination of variables to predict a high score on general delinquency. These results provided some guidelines for developing delinquency prevention programs. Such programs should have a strong family program and a strong drug and alcohol education (treatment) program.

MULTIPLE REGRESSION ANALYSIS WITH THE GENERAL DELINQUENCY SCALE AS THE CRITERION (DEPENDENT) VARIABLE .

Scales	r	Beta	t
CA General mental health problems	.37	.05	.85
C6 Criminal intent	.24	.05	.98
C7 Peer influence on delinquency	-.19	-.05	-.97
C9 School dislike	.11	.00	.97
C12 Family disruption and violence	.45	.34	6.14**
C16 Victim of sexual abuse (General)	.28	.08	1.37
C13 Victim of physical abuse	.41	-.05	-.96
DB Extent of drug use	.53	.26	4.44**

** p < .01.

Regression analysis was also used to determine which of the eight predictor scales would best predict a delinquency pattern involving sexually assaultive crimes and behavior. The analysis showed that among the eight predictor variables, the family disruption and victim of sexual abuse scales formed the best linear combination for predicting sexual assault.

MULTIPLE REGRESSION ANALYSIS WITH THE SEXUAL ASSAULT SCALE AS THE
CRITERION (DEPENDENT) VARIABLE

Scales	r	Beta	t
CA General mental health problems	.34	.03	.63
CB Extent of drug use	.15	.03	.44
C6 Criminal intent	-.08	.00	-.10
C7 Peer influence on delinquency	.04	.07	1.20
C16 Victim of sexual abuse (general)	.37	.28	4.75**
C12 Family disruption and violence	.26	.14	2.45*
C13 Victim of physical abuse	.31	-.05	-.78
C19 School dislike	-.06	-.04	.81

* p < .05.

** p < .01.

The best predictors among the eight predictor scales, for predicting high scores on the physical violence scale was the linear combination of the family disruption and violence scale and the extent of drug use scale.

MULTIPLE REGRESSION ANALYSIS WITH THE ACTS OF VIOLENCE SCALE
AS THE CRITERION (DEPENDENT) VARIABLE

Scales	r	Beta	t
CA General mental health problems	.27	.05	.77
C6 Criminal intent	.23	.08	1.52
C7 Peer influence on delinquency	-.18	-.05	-.86
C9 School dislike	.17	-.03	-.67
C12 Family disruption and violence	.36	.23	3.97**
C13 Victim of physical abuse	.37	-.05	-.85
C16 Victim of sexual abuse (General)	.22	.06	1.09
DB Extent of drug use	.39	.13	2.07*

* p < .05.

** p < .01.

MAJOR FINDINGS

There are a number of major findings reported in this study and these are summarized in this section. Focusing first on drug and alcohol use, it was found that among the DYS committed population substance use is extremely high. Almost all juveniles reported using marijuana and alcohol. There is also extensive use of all other major drug types with the exception of heroin. In comparison with a national sample of comparable age groups, the use of drugs by DYS clients is over three times greater in all drug categories, with the exception of inhalants and heroin. These juveniles reported using almost every drug with which they had an opportunity to experiment. Over one half of the juveniles reported using at least six of ten different drug types. Despite this extensive use of drugs, fewer than one-fifth of these juveniles reported having a bad drug problem.

Factor analysis of the drug items showed that distinct, independent, and reliable patterns of drug use can be identified and used in the assessment of individual juveniles to determine program needs. Results suggest that the patterns and types of use tended to be influenced by drugs that have high street-availability and which are popular among adolescent offenders. The pharmaceutic nature of the drug or the desired or perceived effects that can be derived from a drug may have less influence in forming drug use patterns than its street-availability or its popularity. In addition, two rather clear multiple substance abuse patterns emerged. One pattern involved a narrow pattern involving alcohol, cocaine, marijuana, amphetamines, and hallucinogens. The second pattern is more extensive and involved the drugs in the first pattern, plus other drugs such as heroin,

inhalants, and so-called prescription drugs. This latter pattern represents a more severe and chronic use of drugs. Findings suggest that the multiple substance use pattern is associated with delinquent behavior.

Several important findings from the Community and Personality Survey are noted. It was found that the involvement of these juveniles in illegal activity is extensive. About three-fourths of the population had engaged in various forms of theft, fights, and the sale of marijuana. Over one-half had engaged in acts of burglary, damage of property, and carrying of weapons. Compared to a national sample of youths from the general population, the involvement of the DYS population was from three to ten times greater for most offenses. Most juveniles were aware they were breaking the law and most reported being a leader in such activities.

The DYS population also reported having school-related problems and most had also experienced psychological problems of some type. The rate of reported physical abuse in this population was high as was the incidence of sexual abuse among both males and females.

Over one-fourth of the DYS population reported engaging in sexually assaultive behavior at least once in their lifetimes. Fewer than one-half this number were committed for a sex offense charge, and a slightly higher proportion had been in court on a sexual assault charge.

The independent patterns of behavior analyzed indicated a large variety of adjustment problems. Nine patterns directly related to antilegal or delinquent behavior and 14 personal or community adjustment problem dimensions considered to be of a non-delinquent

nature were identified. These patterns are independent to the point that knowledge about one factor or pattern will not provide sufficient information about any other pattern. Suicidal tendencies in the DYS population statistically increased if the person had been a victim of sexual abuse, or if the person felt alienated from the adult culture.

Through regression analyses it was found that the important predictor of criminal behavior is whether the juvenile comes from a home where there is intense conflict, violence, or abuse. Furthermore, the family violence and physical abuse pattern is more apt to predict delinquent patterns associated with theft, violence, and mischievous acts, whereas the sexual abuse pattern is more apt to predict the sexual offense patterns. The results indicated that the pattern of sexual assault is distinctly different and independent from other forms of delinquency.

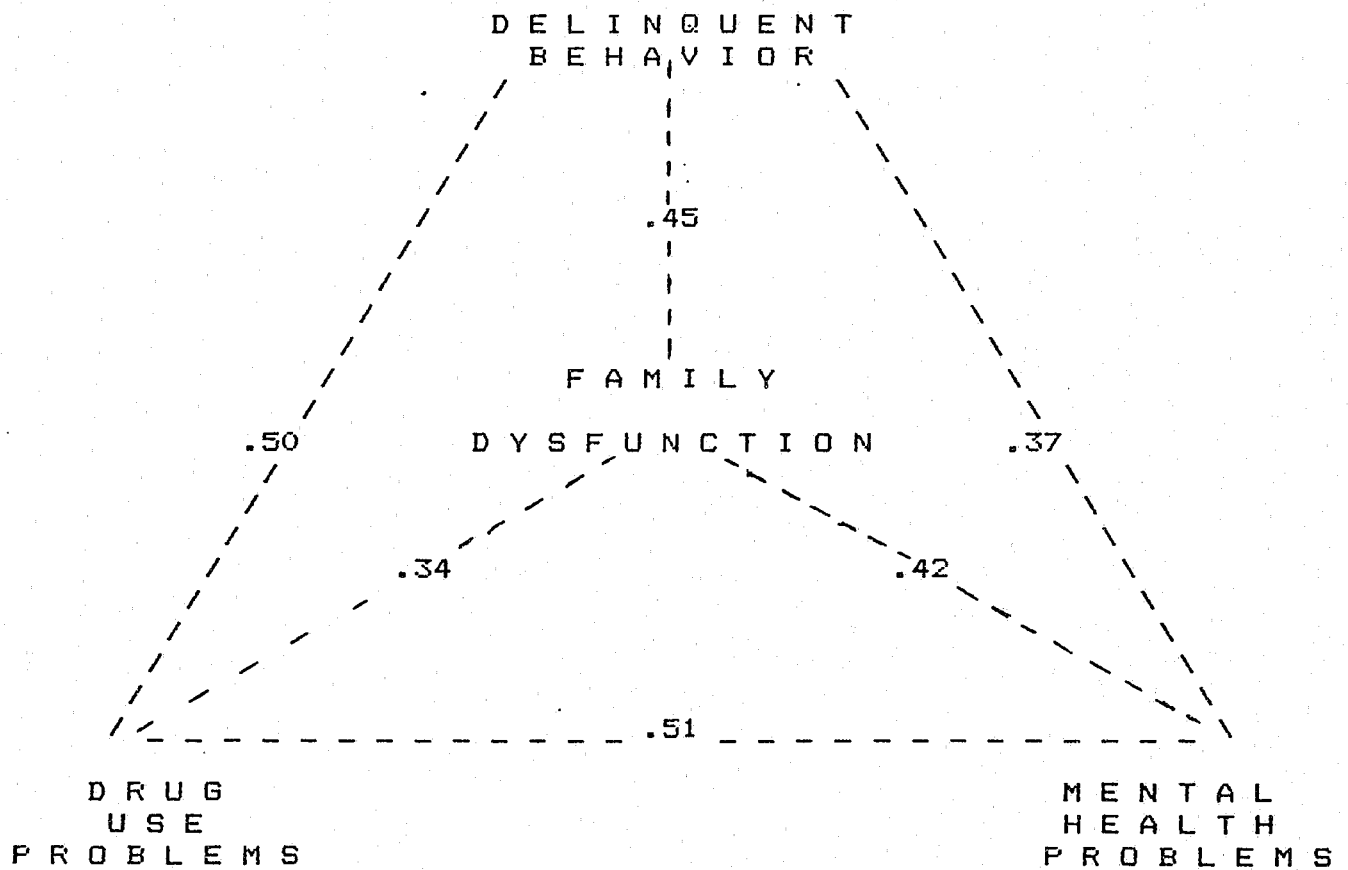
Ethnic differences were identified in the extent of drug use. Black DYS residents had significantly less experience with drugs while Anglo residents engaged in the greatest use of drugs with Hispanic drug use at the DYS average. No significant ethnic differences were found in sexually assaultive behavior, acts of violence, or in the general delinquency scale. However, Anglos were likely to have committed more petty theft and mischievous acts than were other ethnic groups. In addition, Anglos were more likely to report family violence and physical abuse, suicidal thoughts, and prior mental health treatment.

Analysis of the relationship between drug use and the community adjustment patterns revealed a strong relationship between drug use

and delinquency, i.e., delinquent youths are very involved in the use of drugs. There were also strong relationships between delinquency and mental health problems and between mental health problems and drug use. All three of these problem areas had strong relationships with family abuse, violence, and dysfunction. These relationships are presented in the Figure on the following page. The four major problem areas identified (delinquency, drug use, mental health, and family dysfunction) all interact, yet each is conceptually and statistically unique.

There are a number of major findings in this study which are of interest from a more theoretical and methodological standpoint. The multivariate analysis of the two instruments indicates there are distinct, independent, and reliable constructs of drug use and community and personal adjustment problems defined in this population. This supports a multidimensional approach to the assessment of the juvenile offender. Most of the hypothetical constructs defined prior to the study were identified in this analysis. These dimensions have distinct construct validities; different patterns have different covariates. These dimensions also demonstrate criterion validities, i.e., the constructs differentiate among certain subgroups so that a certain construct measures what it is expected to measure. For example, a subsample of sex offenders had significantly higher scores on the scale measuring sexual assault. The reliability and validities of these constructs support the overall validity of the instruments themselves, which lends reliability and validity to the individual items in the instrument.

CORRELATIONS AMONG FOUR BROAD DIAGNOSTIC FACTORS



$P < .01$ for $r = .21$

POLICY IMPLICATIONS

With the high rate of reported drug use among juveniles committed to the Division, it is evident that some programs must be developed to address this problem. The types of programs developed remain an administrative decision, but this report can provide some direction. Clearly, preventive programs are not appropriate for this population as almost all juveniles have already used drugs. However, a significant proportion of the juveniles (50 to 60 percent) have not used drugs extensively and this population shows a greater potential for an intervention strategy. The remaining population (25 to 35 percent) which reported sustained multiple drug use will require more intensive treatment. In addition, it is clear that drug use is not a unidimensional problem, in that drug use varies extensively among the client population. To understand the nature and characteristics of drug use in any individual requires assessment of the independent dimensions identified in the study. An assessment instrument to determine the type and extent of drug use can be developed and should be used to differentiate the drug treatment needs of individual youths.

A question commonly asked is whether reducing drug use will affect delinquent behavior. This study cannot address this question directly. However, even though most juveniles use drugs, there is still a direct relationship between the extent of drug use and the extent of delinquent behavior. This neither supports nor refutes other research indicating that drug use and delinquency may both be the result of some other, but common, underlying factor. Thus, treatment of both behaviors should not be identical, but it cannot be

said that drug treatment should precede treatment of delinquent behavior or vice versa.

It is apparent that juveniles committed to the Division suffer from multiple problems and have an extensive history of family abuse problems and mental health problems. With this knowledge, it would appear appropriate that additional attention be given to the family, particularly if a juvenile's treatment plan recommends eventual return to the family home. Likewise, mental health problems must be addressed. With the identification problem areas, i.e., delinquency, drug use, family, and mental health; and knowing that all require serious attention in the juvenile's treatment plan, it remains both a programmatic and an administrative decision as to how the problems will be addressed. For example, it must be determined whether all problem areas can and should be addressed by DYS staff, or whether treatment should be contracted to community providers, or whether referrals should be made to other service providers. It must also be determined how many problem areas should be addressed while the juvenile is placed with DYS on a delinquency adjudication (i.e., are there legal or ethical issues regarding the right to treatment vs. the right to refuse treatment).

A related issue regards types of offenders. The Division currently has specialized treatment programs for some specific types of offenders (e.g., sex offenders, violent offenders). This study confirms that unique delinquency patterns do exist and identifies patterns of sexual assault, violence, petty theft, and criminal mischief. Although further analysis of the data is needed in this area, it raises the question of whether all offenders should receive

the same treatment or if the treatment programs should focus on identifiable delinquent behavioral typologies.

The two preceding issues (treatment needs and special programs) are especially applicable to the sexual offender population committed to DYS. These individuals are clearly identifiable as a subsample of the general committed population because of their visibility and unique behavioral patterns. In establishing special emphasis programs for this subsample, the administration must carefully define the sexual offender. That is, is the definition based on committing charge or on other identified or acknowledged behavior? How extensive must the incidence of the behavior be before the offender is identified as a sexual offender? Related to this question is whether an offender being treated as a nonadjudicated sexual offender can be penalized for not complying with sexual offender programs. It is important to address this issue to obtain standardization throughout the Division to avoid unwarranted or inappropriate labeling of individual clients.

A final area requiring administrative attention is that of commitment disparity by ethnic group and by region to a more limited degree. It does not appear that Black clients committed to the Division have as severe a multiple problem identification as do other offenders. This finding raises the question of why (even though this group is delinquent) they are committed at a rate greater than their representation in the general population. Differences in the incidence of delinquent behavior were identified by region. This raises a similar question of the reason for its occurrence.