

# EVALUATION OF THE PAINT CREEK YOUTH CENTER: A RESIDENTIAL PROGRAM FOR SERIOUS DELINQUENTS\*

PETER W. GREENWOOD  
SUSAN TURNER  
RAND

*A classic experimental design was used to determine whether youths assigned to a small experimental program, designed to offer a comprehensive and highly structured array of intervention services and activities, actually received significantly different treatment, and performed better, than control youths assigned to traditional training schools. Interviews with staff and youths suggest that the experimental program did deliver significantly more treatment services. One-year follow-up data showed no significant differences in arrests or self-reported delinquency between experimental and control groups, although those who completed the experimental program performed significantly better than those who were removed for disciplinary reasons.*

There are several sources of suggestions and ideas for improving correctional programs for serious juvenile offenders, especially when the current treatment consists of lengthy stays in traditional training schools. For almost two decades critics of these schools have been pointing out their defects (Bartollas et al., 1976) and arguing for various management reforms (Feld, 1977; Greenwood and Zimring, 1985) and noninstitutional alternatives (Coates et al., 1978; Fagan et al., 1984; Romig, 1978). Although there have been several attempts to evaluate programs incorporating some of these suggestions, none of the research designs was adequate to provide compelling evidence regarding the programs' effectiveness in reducing delinquency (Ohlin et al., 1978; Fagan, 1990; Greenwood and Turner, 1987).

During more recent years, several researchers have used meta-analyses to identify characteristics of correctional programs that appear associated with reduced recidivism. In a meta-analysis covering 80 recent corrections' evaluations, Andrews et al. (1990) found that appropriate interventions reduced recidivism by as much as 50%; the indicators of appropriateness included focusing the interventions on high-risk groups; targeting dynamic risk factors

---

\* This paper was prepared under grant 89-IJ-CX-0049 from the National Institute of Justice, Office of Justice Programs, and grant 85-JN-CX-0016 from the Office of Juvenile Justice and Delinquency Prevention, Office of Justice Programs, U.S. Department of Justice. Points of view or opinions expressed in this paper are those of the authors and do not necessarily represent the official position or policies of the U.S. Department of Justice.

directly related to criminal behavior; and using cognitive/behavioral and social learning methods, such as modeling, graduated practice, and role playing. A meta-analysis of over 400 juvenile correctional interventions (Lipsey, 1991) also found that behavioral, skill-oriented, and multi-modal methods produced the largest effects and that these methods produced larger effects in community rather than residential settings.

Further guidance regarding the design of programs for chronic delinquents has been provided by recent longitudinal studies and the development of interactional theories, which suggest that such programs must be comprehensive in their ability to deal with each youth's multifaceted needs and individually tailored to suit each youth's capabilities and strengths (Elliott et al., 1989; Huizinga et al., 1991; Thornberry, 1987).

Although not explicitly designed to test any single intervention theory or technique, the Paint Creek Youth Center (PCYC) was designed and developed by a team of correctional professionals who were familiar with recent findings in the evaluation and clinical literature and had successfully designed and implemented innovative correctional programs in the past (Agee and McWilliams, 1984). As such, it embodies many of the concepts suggested by the evaluation and theoretical literature as being critical to success.

As the evaluators of PCYC, RAND staff designed and operated the random assignment procedures by which youths were placed in either PCYC or one of several training schools operated by the Ohio Department of Youth Services; monitored the implementation and evolution of the program; coded official records; and administered surveys to program staff and youths. The objectives of the evaluation were to determine whether youths assigned to PCYC actually received significantly different programming and treatment from that received by the controls; whether those differences were perceptible to the youths; and whether they resulted in differences in postrelease behavior. We begin with a comparison of the characteristics of the experimental and control programs. We turn next to the design of the evaluation, its results, and implications for future research and practice.

## EXPERIMENTAL AND CONTROL PROGRAM DESIGNS

Paint Creek Youth Center (PCYC), located in southern Ohio, was developed as an experimental program in 1984 by New Life Youth Services, Inc. under a grant from the Office of Juvenile Justice and Delinquency Prevention. The explicit goal of the program was to provide a comprehensive array of high-quality programming tailored to the individual requirements of youths convicted of serious felonies. The program draws on a combination of treatment philosophies, including Vorrath and Brentro's (1974) positive peer culture, Glasser's (1965) reality therapy, and Yochelson and Samenow's (1977)

criminal thinking errors.<sup>1</sup>

Program activities are divided into distinct phases, beginning with a three-day orientation period and ending with a closely supervised transition period, during which youths return to live in their community. Successive phases provide increased privileges and responsibilities. Movement through each phase is contingent upon well-defined behavioral goals. During the last phases of the residential program, which is located in southern Ohio, youths are permitted to work part-time in a variety of on-site enterprises such as farming, woodworking, and auto repair.<sup>2</sup>

Some of the programming and management techniques that distinguish PCYC from the Ohio training schools in which control youths were placed (and most other large institutional programs as well) are

- Small size: provides beds for only 30–35 youths, rather than several hundred.
- Absence of locked doors, fences, and other methods for physically restraining youths: security is provided by close staff supervision and the Positive Peer Culture (Vorrath and Brentro, 1974), a set of techniques and philosophy that entail holding the youths responsible for each other's behavior.
- Problem Oriented Record System (PORS): a highly formalized system for assessing and tracking behavioral deficits (e.g., problem controlling anger, laziness, drug problem) and assets (e.g., popular with peers, good athlete) and which provides the ongoing mechanism for case management and individualizing treatment.
- Clear incentives (e.g., extra privileges) for positive behavior and appropriate punishments (e.g., time-outs, restrictions on participation, demotion) for negative behavior: used to reinforce prosocial behavior.
- Cognitive/behavioral training methods: used several times a week to deal with such issues as anger management, life skills, substance abuse, and victim awareness.
- Daily group sessions: can involve instruction, role playing, or discussion of a particular youth's problems.
- Family group therapy: all families are encouraged and assisted (primarily with transportation) in attending twice monthly (on Sundays) family group therapy sessions, in which families join the youths in their regular groups.

---

1. There is an emphasis on personal responsibility throughout the program; youths are encouraged to "own" their behaviors rather than blaming others. A list of criminal thinking errors provides the basis for a daily scoring of youths' behavior by the staff.

2. The work experience participated in by PCYC youths was for compensation and was designed to simulate the conditions of regular employment. Youths were required to go through normal employment application procedures and were then paired with specific members of grounds or maintenance crews to work on projects with them.

- Intensive community reintegration and aftercare: community workers visit the youth and family during the residential component and have frequent contact following release.

Most juveniles from southern parts of Ohio who are convicted of serious felonies are placed in one of two Department of Youth Services (DYS) institutions—the Training Institute for Central Ohio (TICO) or Riverview. TICO is a maximum-security institution for older and more sophisticated youths; it has a capacity of about 190. Riverview, which is locked but not fenced, is used to house younger delinquents. Both institutions are located on the outskirts of Columbus. TICO appears antiquated and rundown, and much of its furniture is broken or severely abused. Riverview is newer, more modern in design, and is in much better shape.

Both institutions place a heavy emphasis on remedial education and vocational training. Most youths reside in 2-person rooms, grouped into wings of about 40 youths each. In both facilities, youths are locked in their rooms at night, and for disciplinary purposes during the day. Both institutions rely on outside volunteers (individuals, churches, Alcoholics Anonymous, and so on) to provide much of their therapy. Group and individual counseling are provided at the staffs' discretion.

Our interviews with program staff revealed that, compared with control youths in TICO and Riverview, PCYC youths were much more likely to have a job while in custody, have their family come in for counseling, receive drug and alcohol counseling, and receive home furloughs. Interviews with the youths suggest that those at PCYC were more likely to see their program in a positive light. Seventy-four percent of the PCYC youths said they saw their aftercare caseworkers at least twice a week, compared with 19% of the controls. Fifty-two percent said they saw their caseworker more than six times a week.<sup>3</sup>

A survey of the experimental and control program staffs revealed several significant differences that have been hypothesized as contributing to program effectiveness (Greenwood and Zimring, 1985). The PCYC staff were more favorable toward their program director, and the program itself, and were generally happier with their jobs than staff at TICO and Riverview. The PCYC staff also felt closer to the youths and thought that the causes of delinquency were less likely to be external (result of abuse, lack of opportunities, bad homes) than did institutional staff. The PCYC and institutional staff did not differ significantly in their perceptions of their roles. Staff at PCYC were

---

3. These frequencies are based on interviews with the experimental youths who completed the PCYC program and thus were supervised by PCYC aftercare workers. The 16 experimental youths who were interviewed but did not complete the program are not included here.

generally younger, more likely to be white, and somewhat more likely to be female, than staff at TICO and Riverview.

### COMPLETION RATE AND AVERAGE LENGTH OF STAY

The agreement with the judges who controlled release dates was that youths assigned to the experimental program would stay in the residential phase for at least one year, unless they were removed for disciplinary reasons. Seventeen of the first 75 youths (23%) were so removed, after spending an average of 145 days at PCYC (or about 39% of the usual full stay), and spent the remainder of their term in one of the regular training schools. Of those experimental youths who completed their one-year term, a significant fraction (27%) did not successfully move through all three phases of the residential program; 9% were in Phase 1 and 18% were in Phase 2 at the time they were discharged.

The youths who completed the PCYC program spent an average of 376 days in the residential phases of the program, or about 27% longer than the controls, who averaged 295 days in their training school placements. If we include the "early removals" described above, the average length of stay for all experimental youths was 360 days: 327 in PCYC and 33 in training schools.<sup>4</sup>

### COST OF PROGRAM PLACEMENT

The average daily costs for maintaining controls in TICO or Riverview was roughly \$88.60 per day (1988 dollars). The daily costs for PCYC were \$76.56 without including aftercare and \$81.74 with aftercare included. In order to estimate the costs of placement for each experimental and control youth, we multiplied the daily costs by the average number of days in each program. The resulting estimates were \$26,137 for each control youth and \$29,653 for each experimental youth.

## METHODS

### RANDOM ASSIGNMENT AND DATA COLLECTION PROCEDURES

Eligible youths were randomly assigned to experimental (PCYC) or control (regular training schools) conditions. In order to be eligible, youths had to be male, over 15 years of age, committed to the Ohio DYS for a class 1 or 2 felony from 1 of 17 counties in the southwest part of the state, and certified as

---

4. Data regarding transition through PCYC phases, and length of stay in PCYC and training schools, are based on 71 experimental cases (95%) for which data were available.

eligible for assignment to PCYC by the committing court. Random assignment of study youths started in February 1986. By April 1988, 75 experimental and 75 control youth constituted our study sample.

### SOURCES OF DATA

Background data on the youths (including self-reported delinquency and drug use) were obtained from personal interviews with the youths approximately six months after entry into their study placement and by coding information from DYS files. In the interview youths were asked to recall their involvement in 29 behaviors, ranging from status offenses to attacking persons. The 29 measures were a modification of the 47 standard items used by Elliott et al. (1989) in the National Youth Survey.

Process information was obtained by one-time interviews with a sample of all staff at PCYC and the two DYS institutions; exit interviews conducted with assigned caseworkers or counselors at the time each youth left a program; and items from the initial youth interview. Follow-up information was obtained by interviewing each youth one year after he was released from the program and by reviewing juvenile and adult court records.<sup>5</sup>

Data were available for the vast majority of all 150 youths on all data collection instruments: 149 background files; 148 initial youth interviews; and 146 exit interviews with caseworkers. At the end of the data collection period, one youth was still in placement and one was still "absent without leave." Thus, the outcome analyses focused on 148 of the 150 youths. Of these 148 youths, one-year official record data were collected for all, and one-year follow-up interviews were conducted with 124 of the 148 youths (84%).

A comparison between those interviewed and those who were not revealed no significant differences in the percentage of interviews for experimentals, contrasted with controls, or in terms of race, age, conviction offense, county of conviction, prior convictions and prior probations, prior state-level placements, and family history variables (e.g., arrest, drug addiction, prior incarceration). It did appear that noninterviewed youths were significantly more likely to have prior placements and live in less stable family situations than interviewed youths, which suggests noninterviewed youths were somewhat higher risk youths.

### COMPARISON OF EXPERIMENTAL AND CONTROL GROUP CHARACTERISTICS

Table 1 compares the PCYC experimental and control groups and a sample of the overall DYS population on a number of background variables usually found related to recidivism. There are no significant differences between

---

5. Follow-up data for both interviews and official records covered events for the 12-month period after release from PCYC or the DYS institutions.

the experimental and controls on any of these variables, which indicates that the random assignment procedure successfully assigned equivalent groups to the two conditions. However, a higher percentage of the experimental youths were on probation at the time of their most recent arrest, and they averaged more prior convictions and placements. In terms of self-reported delinquency (analyses not reported in Table 1), experimental and control youths were similar in terms of the percentage of youths committing offenses, with the exception of misdemeanor assault; 97% of experimentals, contrasted with 81% of controls, reported committing a misdemeanor assault during the previous year they were home.

Table 1. Background Characteristics of Experimental and Control Samples

	Experimentals ( <i>N</i> = 75)	Controls ( <i>N</i> = 74)	20% Sample of All DYS Admissions 1986-1988 ( <i>N</i> = 1,297)
Males (%)	100.0	100.0	93.2
Race			
% White	60.0	63.5	57.6
% Black	40.0	35.1	40.2
% Other	0.0	1.4	2.2
Age (mean)	16.6	16.5	15.8
# Prior Convictions	3.1	2.6	
# Prior Placements	1.0	0.6	
Status at Time of Arrest			
% Unknown	2.7	0.0	
% Free on Street	37.3	47.3	
% Foster Home	1.3	1.4	
% Probation or Parole	42.7	31.1	
% Residential Placement	9.3	13.6	
% Escapee	6.7	6.8	
Most Serious Conviction Crime			
% Violent	37.3	32.4	17.7
% Theft	44.0	55.4	71.1
% Other Crime	18.7	12.2	11.2
Maximum Sentence (Months)	12.3	12.2	
Family Members in Household			
% With One Parent	70.6	79.8	
% With Both Parents	18.7	16.2	
% With Neither Parent	10.7	4.1	
% With Family Income from Full- Part-Time Work	56.0	54.1	

NOTE: No statistically significant differences were found between experimental and control youths on the variables reported in this table.

### COMPARISON OF STUDY YOUTHS AND INCOMING DYS POPULATION

Since the eligibility criteria for PCYC specified males convicted of felony 1 or 2 offenses in 1 of 17 counties in the southwest part of Ohio, we would expect the study sample to differ from the general DYS population. Information on 20% of the youths admitted to the DYS during the study time period (February 1986 through the spring of 1988) was coded from departmental logs. The majority of admissions were white males who were just under 16 years of age and convicted of lower felony level theft offenses. In contrast to this general population, the study youths were somewhat older and a slightly higher percentage of them were white. All study youths were convicted of felony 1 or 2 offenses; only a third of the general DYS population were convicted of this level of offense. In addition, study youths were about twice as likely to be convicted of a violent offense as the general DYS population. Overall then, the study youths appear, as they were designed to be, a more serious and older class of offender than those in the general DYS population.

### RESULTS

Earlier in this paper we presented evidence to show that the program at PCYC was considerably different from that provided in the training schools and in ways that the intervention literature suggests ought to be associated with increased effectiveness. Our analysis in this section focuses on the criminal conduct of youths in our samples, following their release from custody, as reflected in their arrest records and their own self-reports of delinquency and drug use.

#### OFFICIAL-RECORD OUTCOME MEASURES

We begin with two methods of analyzing post-release failure based on official court records—recidivism and survival analysis. The *recidivism rate* is simply the fraction of a sample that has experienced at least one failure event (arrest) in a specified time period. *Survival analysis* looks at the rate at which failures occur within specified time intervals and is especially of interest when there is reason to believe that the intervention may at least postpone recidivism, even if it is not reduced in the long run (Maltz, 1984; Schmidt and Witte, 1988).

The percentage of youths in each group who were arrested or incarcerated at least once, or once within any of 10 mutually exclusive major crime categories, is shown in Table 2. By all measures, the experimental youths appeared to perform better, although none of the differences in rearrest or reincarceration rates is statistically significant. As expected, youths who were removed from PCYC for disciplinary reasons performed much worse than those who completed the program.

Table 2. Extent of Recidivism for Ohio Youths, One-Year Official Record Follow-Up (in percent of each group)

12-Month Recidivism Measure	Group		Experimental	
	Control (N=75)	Experimental (N=73)	Completers (N=57)	Removals (N=16)
% With Any Arrest	61.3	50.7	40.4	87.5*
% Homicide	0.0	0.0	0.0	0.0
% Rape	0.0	0.0	0.0	0.0
% Robbery	8.0	6.8	8.8	0.0
% Assault	8.0	2.7	1.8	6.2
% Burglary	12.0	9.6	7.0	18.8
% Theft	26.7	17.8	12.3	37.5*
% Weapons	1.3	5.5	3.5	12.5
% Drugs	6.7	4.1	3.5	6.2
% Miscellaneous (Menacing, Trespassing, Resisting Arrest)	29.3	19.2	12.2	43.8*
% Parole Violation	24.0	26.0	21.0	43.8
% Incarcerated at State Level	29.3	23.3	15.8	50.0*
% Homicide	0.0	0.0	0.0	0.0
% Rape	0.0	0.0	0.0	0.0
% Robbery	5.3	2.7	3.5	0.0
% Assault	1.3	0.0	0.0	0.0
% Burglary	4.0	6.8	5.3	12.5
% Theft	13.3	6.8	3.5	18.8*
% Weapons	0.0	0.0	0.0	0.0
% Drugs	1.3	2.7	1.7	6.2
% Miscellaneous (Menacing, Trespassing, Resisting Arrest)	6.7	2.7	0.0	12.5*
% Parole Violation	10.7	5.5	3.5	12.5

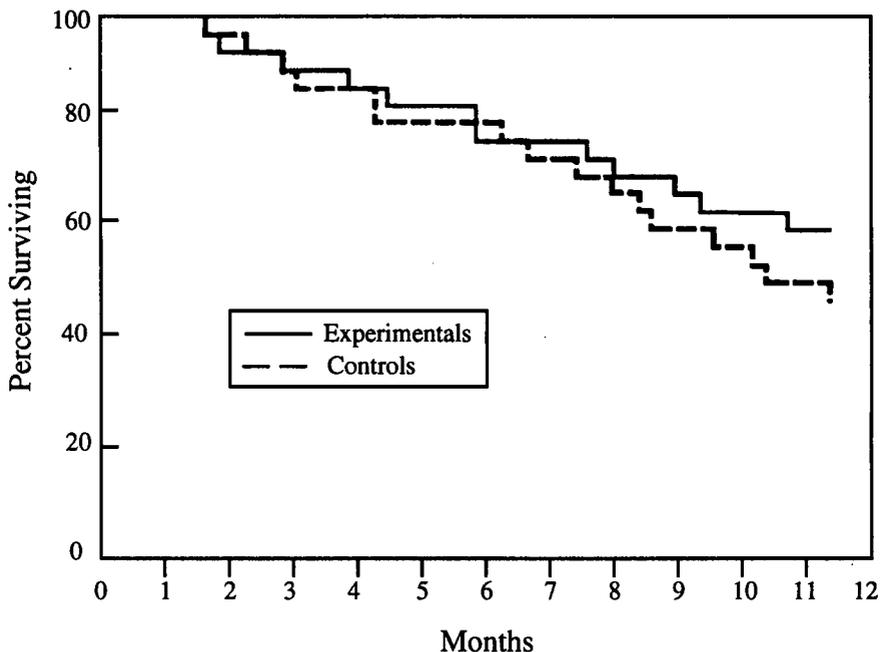
NOTES: \* means groups significantly different,  $p < .05$  using chi-square tests. The percentage of offenders arrested (incarcerated) for specific offense types does not necessarily add to the total percentage arrested (incarcerated) since youths may have been arrested (incarcerated) for more than one offense type during the follow-up period.

Although there was no significant difference in recidivism rates between the experimental and control groups, there are good reasons to expect that the intensive aftercare provided for experimental youths would at least postpone the return to crime. In order to determine if that was so, we conducted survival analyses on the length of time until first arrest, using the Kaplan-Meier (K/M) method.<sup>6</sup>

6. The K/M method was used for this analysis because the offenders were randomly assigned to conditions (obviating the need to adjust for pretreatment differences), the sample sizes were relatively small, and the follow-up period was relatively short. The Kaplan-Meier model (like all survival analysis) assumes (1) that "terminal" cases cease to remain exposed to risk after they terminate (e.g., once the youth has been arrested, he is no longer

The survival curves for experimental and control youths shown in Figure 1 are consistent with the recidivism analysis. Although a smaller fraction of experimentals have failed at all points on the curve, the differences are not statistically significant.

Figure 1. Youth's Survival Estimates During One-Year Follow-Up: Time to First Arrest



Although the data in Table 1 show that the experimental and control youths were not significantly different in terms of background characteristics, the direction of many of the differences suggests that the experimental youths may have been more serious offenders than the control youths. In order to control for differences in background characteristics related to officially recorded recidivism, we conducted multiple logistic regression analyses, modeling officially recorded recidivism as a function of treatment and background characteristics.

For these analyses, we targeted as covariates background characteristics collected from DYS files that were significantly related to "any arrest" or "any safety arrest" (defined as an arrest for homicide, rape, robbery, assault,

---

at risk of failing again) and (2) that "censored observations" are treated as nonterminating "withdrawals" when the offenders are no longer at risk. In our analyses, youths were considered censored when they left the state and did not return during the follow-up period.

or burglary) during the one-year follow-up period. Each of the background characteristics was cross-tabulated with the two recidivism measures. Those significantly related at  $p < .1$  were included as covariates in the logistic regression models. The significant covariates included in the models were whether the juvenile had prior arrests, had a drug problem, age, whether the youth lived with both parents, whether the parents were employed, and whether the family experienced physical injuries.

Contrary to our expectations, the inclusion of these covariates made no difference in the pattern of outcomes. Further, modeling arrest during the follow-up period as a function of "interaction terms" did not reveal any significant interaction between characteristics of the youths and the treatment program.<sup>7</sup> Thus, the PCYC program did not appear differentially effective for subgroups of offenders defined by the characteristics we examined here.

### SELF-REPORTED RECIDIVISM

As part of the one-year follow-up interview, all youths were asked a series of questions about their involvement in seven types of criminal behavior. These measures were chosen as the most serious self-reported delinquency measures generally used by Elliott et al. (1989).<sup>8</sup> The items were as follows:

- steal or try to steal a motor vehicle, such as a car or motorcycle
- steal or try to steal something worth more than \$50
- attack someone with the idea of seriously hurting or killing him or her
- get involved in gang fights
- have or try to have sexual relations with someone against their will
- use force or strong-arm methods to get money or things from other people
- break or try to break into a building or vehicle to steal something or just to look around.

Overall, 75% of the experimental youths reported committing at least one of these offenses during the follow-up period, contrasted with 62% of controls (a nonsignificant difference). The primary differences between the two groups were that more of the experimentals reported assaults (33% vs. 23%) while more of the controls reported burglaries (38% vs. 28%), thefts (42% vs.

---

7. For this analysis, we developed separate logistic models for each of various background characteristics. The models were of the form:  $\text{outcome} = \text{back} + \text{cond} + \text{back} * \text{cond}$ , where back is the background characteristic, cond is experimental or control status, and back\*cond is the interaction of the two. The following background characteristics were examined: age, county of conviction, race, living situation at time of arrest (both parents, single parent), youth/family prior record, youth/family gang membership, youth/family prior hospitalization, youth/family prior alcohol use, youth/family prior drug use, youth/family physical abuse, and youth/family health problems.

8. These measures were chosen based on consultation with Delbert Elliott as to the best subset of items to include to tap the most serious self-reported behaviors.

30%), and auto thefts (18% vs. 9%). Neither group reported any forcible sex.

In responding to the seven items, the youths were asked to indicate the frequency with which they engaged in each act during the one-year period after release from placement. The rates for all seven offenses were summed to produce an overall self-reported offense rate during the follow-up period. Results revealed similar rates for experimental and control youths—15.2 offenses per year for the experimentals and 14.4 for the controls.<sup>9</sup>

In summary, the officially recorded and self-reported measures point in different directions, although none of the differences between treatment groups is statistically significant. One of the reasons for the different patterns for self-reported delinquency versus official records is that the samples are somewhat different. The official-record data cover 148 youths; the self-reported data are from the subset of 124 youths who were interviewed. In order to investigate the effect of this difference, we recomputed standard official-record recidivism rates using arrests for only those 124 offenders for whom we also had self-reported data. This analysis revealed that the interviewed youths appear to have slightly more official record arrests: 54.7% of interviewed experimental youths had been arrested compared with 61.7% of the controls. This reduces the almost 11% difference in recidivism rates (based on all youths shown in Table 2) to 7%, based on the interviewed youths. Thus, these data are consistent with an explanation that some of the discrepancies between self-report and official-record data may be due to the difference in samples.

Another hypothesis is that the two measures reflect different types of offending. The self-reported offenses are a limited subset of all possible criminal behavior, while arrests include everything.

A third hypothesis is that the experimental intervention might make some youths more sensitive or forthcoming in reporting all offenses, or just some types.<sup>10</sup> In comparing self-reports and arrests at the individual level, we found that more than 90% of the arrestees in both groups reported some delinquent acts. However, among the approximately 18% in both groups who were arrested for safety offenses (robbery, assault, rape, homicide, burglary), only 69% of the control group reported a safety crime, compared with 92% of the experimentals, a finding that is consistent with the "increased

---

9. The standard procedure for obtaining frequency estimates with self-reported measures is to record up to 10 offenses per year as reported. For frequencies greater than 10, categorical values are used (4 = every month; 5 = every 2-3 weeks; 6 = every week; 7 = 2-3 times a week; 8 = once a day; 9 = 2-3 times a day). In order to convert the categorical values into frequencies, we translated the categories into 4 = 12; 5 = 22; 6 = 50; 7 = 130; 8 = 365; 9 = 912 and used these to estimate the means.

10. As noted, the experimental program places considerable emphasis on youths "owning their behavior" and admitting their faults.

honesty/sensitivity" hypothesis, but inconclusive due to the small sample. Another piece of evidence in support of the "increased honesty" hypothesis is the fact that more of the experimental youths reported committing assaults during the year prior to their placement.

## DRUG USE

Drug use is a crime in itself and also predictive of involvement in other criminal behavior. There is some reason to believe that youths may be more accurate in reporting drug use than in reporting other forms of criminal behavior, because it involves less social stigma. More of the control youths self-reported use of all types of drugs, as shown in Table 3, and although some of the differences appear quite large, none was statistically significant. Not surprisingly, within the experimental group, the "completers" reported less drug use than the "early removals." Although there was no significant difference between the experimentals and controls in the percentage who reported selling drugs, among the experimentals, three times as many of the early removals, compared with the "completers," self-reported selling drugs (57% vs. 20%), a significant difference.

Table 3. Percentage of Youths Reporting Regular Drug Use, One-Year Follow-Up Interview

Drug	Group		Experimental	
	Control (N=60)	Experimental (N=64)	Completers (N=50)	Removals (N=14)
Tobacco	68.3	65.6	62.0	78.6
Alcohol	31.7	23.4	22.0	28.6
Marijuana/Hashish	40.0	25.0	22.0	35.7
LSD	3.3	6.2	4.0	14.3
Cocaine	15.0	4.7	4.0	7.1
Heroin	1.7	0.0	0.0	0.0
Uppers	6.7	3.1	2.0	7.1
Downers	11.7	3.1	0.0	14.3*
Other	2.0	3.4	4.3	0.0

NOTES: \* indicates completers and removals significantly different,  $p < .05$  using chi-square tests. Regular drug use is defined as use at least once a week.

## DISCUSSION

There are at least two possible interpretations of these findings. One is that there were no significant differences in outcomes between the two programs and that the type of youths studied here do just as well in either one. The other is that PCYC may have had some modest positive effects on postrelease behavior and arrests. In either case, these results will not be good news for

those who expected the experimental program to produce dramatically lower recidivism rates. For whatever reasons, despite the serious efforts that went into designing and implementing the experimental program, the experimental youths do not appear to have behaved substantially better when they returned to the community.

It does not appear that the failure to produce lower recidivism rates can be blamed on the design of the experimental program, which contained most of the features suggested by current theories or recent evaluations as being associated with increased effectiveness. It may be that the experimental program was not as effective as it could have been with the first group of youths; procedures were still being developed and acceptable staffing arrangements worked out.<sup>11</sup> The PCYC could also have included more cognitive/behavioral efforts in the aftercare component, although without additional funding that would have detracted from the residential phases of the program.

We have previously shown that a higher percentage of the PCYC staff were white females than at the training schools. Since many of the youths were black males who did not have strong father figures in their lives, it could be that the lack of more appropriate role models (preferably black males) detracted from the effectiveness of the PCYC program. Or, it could just be that the antisocial patterns of behavior of the youths are so ingrained, or attractive, or reinforced by their social environment, that a one-year effort does not affect their willingness or ability to change.

Some may argue that the results of this experiment have little relevance to current debates about the effectiveness of rehabilitation because the experimental intervention was not designed to test a specific theoretical approach. We can only point out that delinquency theories in their current form provide little but the broadest kind of guidance regarding program design. The PCYC program is like many well-respected programs designed to deal with other types of behavioral problems in that it draws on an eclectic mix of theories and approaches in attempting to develop an individual plan that responds to the needs of each youth.

Further, the meta-analyses described earlier in this paper are based primarily on community-based programs or modest programmatic changes in institutional programs. We know of no other experimental evaluations comparing comprehensive alternatives to institutional programs since Empey and Lubeck's (1971) evaluation of the Silverlake project.

For researchers who are interested in testing other interventions with similar types of offenders, it should be clear that larger sample sizes are needed to

---

11. Both of the initial team leaders (the supervisory position immediately under the director) were let go during the first year, and the cognitive/behavioral programs were not implemented for the first six to eight months of the program. A more detailed description of the implementation process is available from the authors.

measure the modest 10% to 20% impacts that even the best designed programs are likely to achieve and that more detailed self-reported information may be needed to clarify discrepancies between self-reports and official reports of offending.

It also appears that more attention should be devoted to maintaining gains in prosocial behavior after youths return to their community. It may be that the forms of surveillance and assistance provided by PCYC are not enough. It may be necessary to create some kind of peer support group, on the order of that provided by 12-Step programs like Alcoholics Anonymous, which the youths would be required to attend. A program for drug-involved adult offenders in Oakland has demonstrated that behavioral contracts can be used to increase participation rates in such groups (Gross, 1991).

We think that this evaluation has several other implications for correctional practice. For the defenders of traditional training schools, it suggests that even overcrowded ones in systems plagued by antiquated facilities, low morale, and frequent turnovers in management are not as ineffective or harmful as many would argue, at least not in terms of the outcomes we were able to measure here. This conclusion is particularly hard to digest for those who observed the positive and forthright behavior of most PCYC youths in comparison with those in TICO. One possible explanation for why this behavior apparently failed to carry over to postrelease behavior is something like that offered to explain the negative impacts of the Cambridge-Somerville Project: that the intervention raised unrealistic expectations that were not met in the world outside the program (McCord, 1981). It may be that the somewhat chaotic and calloused environment of TICO does just as good a job of preparing youths for the outside world as the Positive Peer Culture of PCYC, because that atmosphere is closer to the one the youths will actually face when they return to the community. During the first year after their release, about 23% of these youths experienced the death of a family member, another 24% experienced the death of a friend, and 24% were fired or laid off.

For the proponents of small, open programs like PCYC, this evaluation should lend support to the argument that such programs can be run as cost-effectively as training schools and with no undue risk to the public, and that such programs will be perceived as superior to training schools by many judges, academicians and outside observers, regardless of their actual impact. The Ohio Department of Youth Services not only continues to support PCYC, but it is also starting a similar program in the northern part of the state.<sup>12</sup>

---

12. New Life Youth Services is operating a program similar to PCYC in West Palm Beach, Florida.

## REFERENCES

- Agee, Vicki L. and Bruce McWilliams  
1984 The role of group therapy and the therapeutic community in treating the violent juvenile offender. In Robert A. Mathias, Paul DeMuro, and Richard Allinson (eds.), *Violent Juvenile Offenders: An Anthology*. San Francisco: National Council on Crime and Delinquency.
- Andrews, D.A., Ivan Zinger, Robert D. Hoge, James Bonta, Paul Gendreau, and Francis T. Cullen  
1990 Does correctional treatment work? A clinically-relevant and psychologically-informed meta-analysis. *Criminology* 28:369-404.
- Bartollas, Clemens, Stewart J. Miller, and Simon Dinitz  
1976 *Juvenile Victimization: The Institutional Paradox*. New York: John Wiley & Sons.
- Coates, Richard B., Alden D. Miller, and Lloyd E. Ohlin  
1978 *Diversity in a Youth Correctional System: Handling Delinquents in Massachusetts*. Cambridge, Mass.: Ballinger.
- Elliott, Delbert S., David Huizinga, and Scott Menard  
1989 *Multiple Problem Youth: Delinquency, Substance Use, and Mental Health Problems*. New York: Springer-Verlag.
- Empey, Lamar T. and Steven G. Lubeck  
1971 *The Silverlake Experiment: Testing Delinquency Theory and Community Intervention*. Chicago: Aldine.
- Fagan, Jeffrey  
1990 Treatment and re-integration of violent delinquents: Experimental results. *Justice Quarterly* 7:233-263.
- Fagan, Jeffrey, Cary J. Rudman, and Eliot Hartstone  
1984 Intervening with violent juvenile offenders: A community reintegration model. In Robert A. Mathias, Paul DeMuro, and Richard S. Allinson (eds.), *Violent Juvenile Offenders: An Anthology*. San Francisco: National Council on Crime and Delinquency.
- Feld, Barry C.  
1977 *Neutralizing Inmate Violence*. Cambridge, Mass.: Ballinger.
- Glasser, William  
1965 *Reality Therapy—A New Approach to Psychiatry*. New York: Harper Colophon Books.
- Greenwood, Peter W. and Susan Turner  
1987 *The VisionQuest Program: An Evaluation*. Santa Monica, Calif.: RAND.
- Greenwood, Peter W. and Franklin Zimring  
1985 *One More Chance: The Pursuit of Promising Intervention Strategies for Chronic Juvenile Offenders*. Santa Monica, Calif.: RAND.
- Gross, Jane  
1991 Probation and therapy help some drug users. *The New York Times*, June 21.

- Huizinga, David, Rolf Loeber and Terence Thornberry  
1991 Urban Delinquency and Substance Abuse: Technical Reports, Vol. I, II, and Appendices. Washington, D.C.: Office of Juvenile Justice and Delinquency Prevention, U.S. Department of Justice.
- Lipsey, Mark W.  
1992 Juvenile delinquency treatment: A meta-analytic inquiry into the variability of effects. In Thomas Cook et al. (eds.), *Meta-Analysis for Explanation: A Casebook*. New York: Russell Sage Foundation.
- Maltz, Michael D.  
1984 *Recidivism*. Orlando: Academic Press.
- McCord, Joan  
1981 Consideration of some effects of a counseling program. In Susan Martin, Lee Sechrest, and Robin Redner (eds.), *New Directions in the Rehabilitation of Criminal Offenders*. Washington, D.C.: National Academy Press.
- Ohlin, Lloyd E., Robert B. Coates, and Alden D. Miller  
1978 *Reforming Juvenile Corrections: The Massachusetts Experience*. Cambridge, Mass.: Ballinger.
- Romig, Dennis A.  
1978 *Justice for our Children: An Examination of Juvenile Delinquent Rehabilitation Programs*. Lexington, Mass.: Lexington Books.
- Schmidt, Peter and Ann Dryden Witte  
1988 *Predicting Recidivism Using Survival Models*. New York: Springer-Verlag.
- Thornberry, Terence P.  
1987 Toward an interactional theory of delinquency. *Criminology* 25:863-891.
- Vorrath, Harry and Larry K. Brentro  
1974 *Positive Peer Culture*. Chicago: Aldine.
- Yochelson, Samuel and Stanton E. Samenow  
1977 A new horizon for total change of the criminal. In Samuel Yochelson and Stanton E. Samenow (eds.), *The Criminal Personality: The Change Process*. Vol. II. New York: Jason Aronson.

Peter Greenwood is a senior researcher in RAND's Social Policy Department. His previous work has focused on the issues of criminal careers, selective incapacitation, and juvenile justice. His current interests include the effectiveness of juvenile corrections and drug treatment programs.

Susan Turner is a senior researcher in RAND's Criminal Justice Program. Her current work involves correctional evaluations of intensive supervision, probation and parole, work release, and Treatment Alternatives to Street Crime (TASC).

Copyright of Criminology is the property of Blackwell Publishing Limited and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.