



115113

115113

**OUTCOME EVALUATION OF A PRISON THERAPEUTIC COMMUNITY FOR
SUBSTANCE ABUSE TREATMENT: PRELIMINARY RESULTS**

Harry K. Wexler, Ph.D., Douglas S. Lipton, Ph.D., & Kenneth Foster

Narcotic and Drug Research, Inc.
55 West 125th Street
New York, NY 10027
(718) 870-8351

NCJRS

JAN 15 Rec'd

ACQUISITIONS

Presented at the American Society of Criminology Annual Meeting, San Diego,
November 1985

This report was supported by a research grant (GR 1 R 18 DA 03310-01) to Narcotic and Drug Research, Inc. by the National Institute on Drug Abuse. Points of view or opinions in this document do not necessarily represent the official position of the U.S. Government or Narcotic and Drug Research, Inc.

115113

**U.S. Department of Justice
National Institute of Justice**

This document has been reproduced exactly as received from the person or organization originating it. Points of view or opinions stated in this document are those of the authors and do not necessarily represent the official position or policies of the National Institute of Justice.

Permission to reproduce this copyrighted material has been granted by
**Public Domain/U.S. Government
Narcotic and Drug Research, Inc.**

to the National Criminal Justice Reference Service (NCJRS).

Further reproduction outside of the NCJRS system requires permission of the copyright owner.

OUTCOME EVALUATION OF A PRISON THERAPEUTIC COMMUNITY FOR SUBSTANCE ABUSE TREATMENT: PRELIMINARY RESULTS

HARRY K. WEXLER Ph.D., DOUGLAS S. LIPTON PH.D. & KENNETH FOSTER

There is a pervasive belief in the fields of substance abuse and corrections that prison-based rehabilitation is ineffective and treatment efforts should be reserved for the community. Correctional institutions are generally hostile environments that impede attempts at both treatment and research. Thus it is highly difficult to maintain the integrity of treatment programs and research studies within correctional facilities. This study reports treatment findings for a therapeutic community (TC) which has operated in the New York State Correctional system for over eight years with a sample of over 2000 inmates. This is the first large scale study that provides convincing evidence that prison-based TC treatment can produce significant reductions in recidivism rates.

A recent survey of 12,000 State prison inmates provided information on the severity of their drug problems (Bureau of Justice Statistics Bulletin, 1983). More than three quarters of the inmates had ever used illicit drugs, 56% reported using drugs within the month just prior to committing the crime for which they were incarcerated for, and 33% admitted using drugs at the time of the crime. Comparisons with drug abuse within the general population shows that inmates were twice as likely to have ever used illicit drugs and three times as likely to have used drugs during the last month. A summary of the extensive research on the relationship between drug abuse and crime (Gropper, 1985; based upon the work of: Johnson et. al., 1985; Ball et. al., 1983; and Inciardi, 1979) provides convincing evidence that a relatively few severe substance abusers are responsible for an extraordinary amount of crime. The need for effective prison-based drug treatment is obvious; however, the difficult problem is to provide treatment that works.

The most extensive review of the outcomes of various rehabilitation efforts for criminal offenders was produced by Lipton, Martinson, and Wilks (1975). The overall conclusion was that ". . .the field of corrections has not as yet found satisfactory ways to reduce recidivism by significant amounts" (p. 627). Other reviews (e.g., Bailey, 1966; Adams, 1975) do not contradict this pessimistic conclusion.

Reasons for the lack of documented notable effectiveness of correctional treatment include: a limited number of relevant studies which are of generally poor quality, the present narrow range treatment techniques, the fundamental incompatibility of punitive correctional environments and rehabilitation programs seeking to facilitate positive client change, and a lack of connection between both treatment and evaluation with theory (Lipton, et al., 1975).

Within the community, TCs have been shown to be effective with clients who have extensive criminal histories (DeLeon et al. 1972; Nash, 1973, System Science, 1973; Sells et al. 1976; Wilson and Mandelbrot, 1977; Holland, 1978; Bale, 1979; DeLeon, et al. 1979; DeLeon 1984). The positive results of a five year follow-up evaluation of Phoenix House (De Leon et al. 1979, 1984) is of special importance because the correctional TC, "Stay N' Out" program is in part based upon the Phoenix

House model.

Although a number of TCs within prison settings have been established in state and federal prisons (NIDA, 1981) there has been almost no outcome research conducted. A study conducted by Lynn and Nash (1975) assessed changes in arrest rates for a total of 173 inmates who attended seven prison-based drug programs. Four of these programs were TCs based on the traditional Synanon model, two were counseling programs and one was a drug-free residential program. The study did not find significant differences in arrest rates between any of the programs and a comparison group. However, a more extensive analysis of the data (Des Jarlais and Wexler, 1979) found that two of the four TCs did significantly better than the comparison group.

The "Stay 'N Out" TC has operated a male and female program in the New York State Correctional System for over eight years. Prior research has shown that this program was successful in implementing and maintaining positive TC treatment environments, capable of retaining inmates for optimal treatment durations (6 months), and facilitated positive personality changes as assessed by standard psychological measures (Wexler and Chin, 1981).

The rationale for the establishment of the "Stay 'N Out" prison TC derived from outcome research on community-based TCs. An important finding was that successful outcomes (reduced crime and substance abuse and increased employment) were related to the time spent in treatment (DeLeon et al, 1979, Simpson, 1979, 1980). In fact, residents who were sent to the program by the courts had a better success rate than volunteers. However, community TCs produce excessively high drop-out rates which limit their effectiveness to the relatively few clients who remained at least three months in the program (DeLeon, 1979). One of the justifications for the establishment of the "Stay 'N Out" program was to test the efficacy of the "time-in-program" variable within an environment where residents are likely to stay at least three months. It was expected that inmates would find the program unit, which is isolated from the general prison population of inmates, considerably more desirable than regular prison units. Thus, major objectives of this study were to evaluate the effectiveness of prison-based TC treatment and assess the "time-in-program" hypothesis.

METHOD

Design

This study employs a quasi-experimental design with two types of comparison groups. (1) Inmates who volunteered for the TC program but for various administrative reasons, never participated to help control for initial motivation to join a prison TC. (2) Similar inmates who participated in other types of prison-based drug abuse treatment programs (counseling and milieu) with similar optimal time requirements located at different prisons. These treatment comparison groups help control for self selection factors in the analysis of the effects of time in program.

Parole outcome information was obtained for 1,626 male and 398 female inmates in New York State prisons. The treatment groups included all program clients who had terminated thru 2/28/84. The male and female comparison groups were

composed of inmates who had volunteered for the therapeutic community program and were placed on waiting lists but never entered the program because they could not meet the time eligibility criteria¹ or other administrative reasons. Parole outcome status was obtained as of 2/8/85. Brief descriptions of the groups are provided below.

Male Study Groups

(1) Male TC Treatment (N=434): The "Stay 'N Out" program is a modified classical hierarchical TC which began in July 1977. Program capacity is 120 inmates who live in two segregated units. The environment is highly structured with job levels of increasing responsibilities and associated status. Group activities include encounters (therapy), seminars (education) and special groups to deal with various unit management problems. Individual counseling and referrals to community TCs are also provided. The TC approach was considered the most intense form of treatment.

(2) Male Milieu Treatment (N=574): A non-TC milieu drug treatment program that was established in November 1978. This program has a capacity of 124 and is located in a segregated living unit providing inmates with individual, group and vocational counseling as well as referral services. The milieu program was considered a moderately intense treatment.

(3) Male Counseling Treatment (N=260): A drug counseling program that was established in April 1980, with a capacity of 50. Clients participate in once-a-week counseling (either individual or group) and referral service are available at termination. Counseling was viewed as the least intense treatment.

(4) Male Young Treatment (205): A drug counseling program for young inmates (ages 16 -25) that was begun in February 1980, with a capacity of 42. Inmates attend the program for one-half day five days per week; activities include group and individual counseling, and educational classes. Referral services are also available at termination. An intensity level was not assigned to this program.

(5) Male No-Treatment (N=155): Composed of inmates who volunteered for the TC program and were placed on a waiting list but never entered the program because they could not meet the time eligibility criteria or changed their minds. This group is a control for the initial motivation to join the program.

Female Study Groups

(1) Female TC Treatment (246): The female "Stay 'N Out" program is a modified classical hierarchical TC which began in January 1978. Program capacity is 32 inmates who live in a segregated unit. The environment is highly structured with job levels of increasing responsibilities and associated status. Group activities include encounters (therapy), seminars (education) and special groups to deal with various unit management problems. Individual counseling and referrals to community TCs are also provided. The TC approach was considered the most intense form of treatment.

¹One of the criteria for admission to the male TC was that the inmates be no more than 12 months no less than 7 months away from parole eligibility.

(2) Female Counseling Treatment (N=113): A drug counseling program was established in April, 1980. Program capacity was 50. The program provided once-a week individual or group counseling. The program ceased operating November 1982. Counseling was viewed as the least intense treatment.

(3) Female No-Treatment (N=38): Composed of inmates who volunteered for the female TC program and were placed on a waiting list but never entered the program because they changed their minds. There was no time eligibility criteria for the female TC program. This group was a control for the initial motivation to join the program.

RESULTS

Background

Table 1 shows the Ns and selected background information for each group. The average ages for males and females was 32 and 33 respectively. The ages of all the groups were highly similar except for the Male Young Treatment group which had a significantly lower mean age of 23. Ethnicity was generally similar for most groups (50% black, 25% White, 25% Hispanic) with the exception of the Male Young Treatment and Female No-Treatment groups who had larger proportions of black inmates. Approximately two-fifths of the inmates had received more than an 8th grade education except for the Male Young Treatment group which had 64% who had gone beyond the 8th grade and the Female Counseling and Female No-Treatment groups who had over 90% with more than an 8th grade level. Marital status for the groups was similar, approximately 50% were never married except for the Male Young Treatment group in which 98% were single.

(Insert Table 1 about here)

Composite scores for the severity of prior criminal history and the current offense for which the inmate was incarcerated for (obtained from parole records) are shown in table 1. The Crime History Score is a weighted average of prior arrests, jail and prison terms, felony convictions, probation sentences and parole revocations. Scores between 0 and 1 are considered less serious, scores between 2 and 5 are moderately serious, and scores between 6 and 11 are as very serious. Offense Score is a sum of the felony class, if weapons were involved and if there was forcible contact.

The males groups generally showed higher Crime History scores than the female groups. Table 1 shows that the average male scores were in the moderate serious range with the exception of the Male Young Treatment group which was within the less serious range. Statistical analysis revealed that the Male Milieu Treatment group score was significantly higher and the Male Young Treatment group score was significantly lower than the other male groups. The female groups had scores which were in the less serious range and there were no significant differences among the groups. The Offense scores were similar for all male and female groups with no significant differences.

Table 2. shows background time variables for all male and female groups. The variables include Months in Program, Months in Prison (current sentence), Months in Prison Post-Program (time between program termination and release from prison), and Months on Parole Supervision (time from prison release to expiration of parole tenure).

(Insert Table 2 about here)

The average time in program ranged from 5 to 8 months across the program groups. Among males the TC and Milieu Treatment clients average time in program was significantly greater than for the Counseling and Young Treatment clients. Time in program for the Male Milieu Treatment clients was also significantly greater than the Male TC residents. Among the female program groups the Female TC clients had significantly more time in program than the Female Counseling Treatment clients.

Total time in prison for the current sentence was longer for males than females. The male groups average time in prison varied between 24 and 37 months. The Male Young Treatment group's mean time in prison was significantly less than the other male groups and the Male Milieu Treatment group's average prison time was significantly greater than the other male groups. The female groups ranged from 16 to 28 months in prison with significant differences between each group.

The average time in prison after program termination was approximately 6 months for the male and female program groups. Among the male groups The Male Young Treatment group's average time between program termination and release from prison was significantly higher than the other male programs and the Male Counseling Treatment group average time was significantly lower than the other male groups with the exception of the Male Milieu Treatment group. The differences between the female treatment groups were not significant.

Months on Parole Supervision is the measure of "time at risk" which defines the observation period in which outcomes were recorded. The male groups generally had longer durations on parole supervision than the female groups. Table 2 shows that the Male groups ranged between 26 and 42 Months on Parole Supervision. The Male Young Treatment group's "time at risk" was significantly less than the other groups and the Male Milieu Treatment group had a longer duration of parole supervision than the TC treatment group. Months on Parole Supervision for the female groups ranged between 29 and 35 months with no significant differences between the groups.

Outcome

The specific parole study outcome hypotheses were: (1) Outcome would be positively related to the level of treatment with the TC producing the best results followed by Milieu, Counseling, and No-Treatment. (2) Time-in-treatment would be positively related to outcome for the TC treatment, no predictions were made for the other treatment groups. Male and female data were analyzed separately.

The parole outcome variables included First Arrest, Time Until First Arrest and Positive Parole Discharge. Positive Parole Discharge is the completion of parole tenure without rule violations, arrests or revocation. The arrest data were obtained for

all active and discharged parole clients. These results are preliminary since significant differences in background and "time at risk" are not controlled.

The male arrest data show differences among the groups that support the prediction that outcome would be related to treatment level. Statistical comparisons revealed that the Male TC treatment group had a significantly lower arrest rate than all the other male groups. The arrest rate for the Male Milieu group was significantly lower than for the Male Counseling, Male Young, and Male No-treatment groups. The Male Counseling group's arrest rate was significantly lower than the Male Young treatment rate but did not differ from the Male No-treatment group arrest rate. Thus, the male data provide support for the study hypothesis that differential outcomes would be obtained with the TC treatment showing the best results followed by the Milieu treatment and Counseling treatment. The poorest outcomes were found for the Male Young treatment group for which there were no specific expectations although age is generally inversely related to criminality.

(Insert Table 3 about here)

Similar arrest results were found for the female groups. The Female TC group had a significantly lower arrest rate than the Female Counseling and Female No-treatment groups combined. Individual comparisons revealed that the Female TC's arrest rate was significantly lower than the Female Counseling group but the differences between the No-treatment group versus the Counseling and TC groups did not reach significance. In fact, the the No-Treatment group had a lower recidivism rate than the Counseling group. Thus, the female data indicate that the TC was effective in reducing recidivism rates but the Counseling treatment shows no such effect.

The prediction that inmates who spent more time in TC treatment would show lower arrest rates was not supported by either the male or female arrest data. However, time-in-program was related to the time until first arrest.

Figure 1 which shows months until arrest by months in program for the male groups reveals a notable pattern for the TC group. There is a very strong relationship apparent in the TC data with the average time until arrest significantly increasing with time spent in the program. The mean time until arrest for the under 3 months in program group was approximately 9 months; for the 9-11.9 month group average time until arrest increased to a peak of 18 months; and for the over 12 months program group the time until arrest decreased to an average of 14 months. The other male treatment groups did not show similar differences in time until arrest for time-in-program groups. The relationship between time-in-program and time until arrest was less defined among the female groups.

(Insert Figure 1 about here)

Thus, there was positive short-term effects of time-in-program for the Male TC treatment for those clients who were arrested following treatment. Longer time in prison TC treatment appears to increasingly postpone arrests for up to 12 months in

treatment. This finding shows that TC program is capable of producing short term outcome effects and supports the time-in-treatment study hypothesis.

Long term treatment effects were assessed by an analysis of types of parole termination. The variable Positive Parole Discharge indicates positive parole termination. Clients with positive parole discharge completed their parole tenure without rule violations, arrests, or revocation. These results reflect long term outcome because the average time on parole supervision (i.e. "time at risk") was three years. Analysis of the overall differences between the groups did not reach significance for either the males or females. However, analyses of time in program effects revealed impressive findings.

Figures 2 shows the percentages of positive parole discharges by months in treatment for the male treatment groups.

(Insert Figure 2 about here)

The pattern of results resemble the time until arrest data reported above. There was a strong positive relationship between months in program and an increasing percentage of positive parole outcomes for the TC treatment group but not for the other treatments. The percentage of male TC positive parole discharges increased from 49% for the under three month group to a peak of 77% for the 9-11.9 month group and then decreased to 57% for the over 12 month group.

Figure 3 shows the percentage of positive female parole discharges by months in treatment. The female data resembles the male results.

(Insert Figure 3 about here)

Female time-in-program data show an increase in positive parole outcomes from 79% for under three months, rise to a peak of 92% for 9-11.9 months followed by a decrease to 77% for the clients who remained in program over 12 months. Thus, the long term parole outcome results support the prediction that the more time spent in the prison TC program would be related to a decrease in recidivism rates.

DISCUSSION

The overall pattern of results indicate that the "Stay 'N Out" prison TC was effective in reducing recidivism rates; and that time-in-program is positively related to increases in time until arrest for those who recidivate and greater likelihood of positive parole outcome. The significant decreases in recidivism replicates an earlier smaller "Stay 'N Out" study that showed reductions in parole revocation (Wexler and Chin, 1981). The time in program findings replicate and support similar findings in Community TC outcome studies (DeLeon et al, 1979, Simpson, 1979, 1980).

The comparison of the TC with other types of treatment with similar average times in program reduces the plausibility of the self-selection explanation of the TC time in

program finding. Although the non-TC programs did not show time in program effects there was some evidence of effectiveness for the male milieu treatment approach. The exceedingly poor outcome found for the Young male treatment group requires further study.

Perhaps the most provocative finding was the unexpected decline in Time Until Arrest and Positive Parole Discharge for the over 12 month TC clients. However, these results must be considered preliminary since background differences between the groups have not been controlled for. Current multivariate analyses are currently being conducted to control for group differences.

Discussions with program staff provided a potential explanation for the unexpected time-in-program result. "Stay 'N Out" is based upon the classic hierarchical TC model (e.g., Phoenix House) which involves a process of engaging clients in a highly-structured treatment environment that emphasizes personal development and internalization of prosocial values and a strong sense of responsibility. Upon admission clients are given low-level jobs and are granted little status. During the early phases of treatment they are provided opportunities to earn higher-level positions and increased status through sincere involvement in the program and hard work. When clients reach 12 months in community TCs they usually enter the re-entry phase where they go into the community and try out their TC "tools" under the guidance of program staff. However, within prison the Parole Board controls release into the community. Thus, when certain clients are primed for re-entry they are forced to remain in a situation that is disappointing and frustrating. At 12 months there are no further status levels to which they can aspire. "Stay 'N Out" staff report that soon after the appropriate time for re-entry (approximately at 12 months) is missed these clients become disillusioned and gradually reduce their involvement in the TC. Program staff believe that these disillusioned clients are less likely to benefit from the prison TC treatment or enter community treatment programs after release.

Three results have important potential policy implications within corrections: (1) prison-based TC treatment is effective for inmates with substance abuse histories; (2) maximum treatment benefit is achieved by clients who remain 9 to 12 months in treatment; and, (3) clients who remain more than 12 months in TC treatment show some reduction in treatment benefit. Thus, it is recommended that ample support be provided for prison TC substance abuse treatment programs and the establishment of a strong re-entry phase after approximately one year of in-prison treatment.

Table 1
Parole Outcome Study
Background Information

| Males | | | Ethnicity | | | Education | | Marital Status | | | Crime | Scores |
|-----------------------|-------------------|---------------|-------------------------|-----------|--------------|------------------------|---------------|-------------------------|----------------|----------------|--------------------|--------------|
| | <u>N</u> | <u>X̄ Age</u> | <u>B1</u> | <u>Wh</u> | <u>Hisp.</u> | <u>< 8</u> | <u>> 8</u> | <u>Single Div/Sep</u> | <u>Married</u> | <u>History</u> | <u>Offense</u> | |
| TC Treatment | 434 | 33.7 | 52.3 | 21.1 | 26.6 | 17.1 | 82.9 | 45.7 | 10.7 | 43.6 | 2.5 | 4.1 |
| Milieu Treatment | 574 | 34.4 | 52.4 | 24.2 | 23.5 | 21.2 | 78.8 | 46.6 | 11.6 | 41.8 | 3.4 | 4.3 |
| Counseling Treatment | 260 | 32.7 | 51.4 | 22.6 | 26.1 | 20.8 | 79.2 | 45.5 | 11.7 | 42.8 | 2.7 | 4.3 |
| Young Treatment | 205 | 23.1 | 65.9 | 18.5 | 15.6 | 35.6 | 64.4 | 97.6 | 0.0 | 2.4 | 1.0 | 3.9 |
| No-Treatment | 155 | 33.0 | 50.0 | 24.1 | 25.9 | 22.8 | 77.2 | 56.1 | 7.7 | 36.1 | 2.9 | 4.1 |
| Statistic Probability | F=125.87 <.001 | | Chi Sq =17.39 <.05 | | | Chi Sq.=28.22 <.001 | | Chi Sq.=188.34 <.001 | | | F = 35.84 <.001 | F=2.12 NS |
| <u>Females</u> | | | | | | | | | | | | |
| | <u>N</u> | <u>X̄ Age</u> | <u>B1</u> | <u>Wh</u> | <u>Hisp.</u> | <u>< 8</u> | <u>> 8</u> | <u>Single Div/Sep</u> | <u>Married</u> | <u>History</u> | <u>Offense</u> | |
| TC Treatment | 246 | 33.5 | 53.7 | 17.1 | 29.3 | 19.8 | 80.2 | 51.7 | 16.5 | 31.7 | 1.4 | 4.2 |
| Counseling Treatment | 113 | 33.2 | 53.1 | 27.4 | 19.5 | 8.8 | 91.2 | 53.3 | 19.6 | 27.1 | 1.7 | 4.0 |
| No-Treatment | 38 | 31.2 | 79.9 | 7.9 | 13.2 | 7.7 | 92.1 | 54.3 | 14.3 | 31.4 | 1.1 | 3.8 |
| Statistic Probability | F=1.90 NS | | Chi Sq = 16.43 <.005 | | | Chi Sq =8.85 <.05 | | Chi Sq = 1.19 NS | | | F=1.54 NS | F=.84 NS |

Table 2
Parole Outcome Study
Time Variables (Months)

| <u>Males</u> | <u>\bar{X} Months In Program</u> | <u>\bar{X} Months in Prison</u> | <u>\bar{X} Months Prison-Post- Program</u> | <u>\bar{X} Months on Parole Supervision</u> |
|----------------------|---|--|---|--|
| TC Treatment | 7.2 | 29.7 | 6.7 | 34.6 |
| Milieu Treatment | 8.2 | 37.2 | 5.8 | 39.2 |
| Counseling Treatment | 5.3 | 30.3 | 4.7 | 41.8 |
| Young Treatment | 5.4 | 24.3 | 8.8 | 26.5 |
| No-Treatment | -- | 33.0 | -- | 39.4 |
| F | 22.79 | 21.25 | 11.28 | 6.15 |
| Sig. | <.001 | <.001 | <.001 | <.001 |
| <u>Females</u> | | | | |
| TC Treatment | 6.5 | 22.1 | 6.5 | 32.9 |
| Counseling Treatment | 5.3 | 27.8 | 6.0 | 35.0 |
| No-Treatment | -- | 16.5 | -- | 28.8 |
| F | 4.85 | 11.18 | .027 | 0.79 |
| Sig. | <.05 | <.001 | NS | NS |

Table 3

Parole Outcome Arrest

| <u>Males</u> | <u>Total N</u> | <u>% Arrested</u> |
|---------------------------|----------------|-------------------|
| TC Treatment | 434 | 27.0 |
| Milieu Treatment | 573 | 34.6 |
| Counseling Treatment | 260 | 40.0 |
| Young Treatment | 205 | 53.7 |
| No-Treatment | 155 | 40.5 |
| Chi Square Probability | | 44.55 < .0001 |
| <u>Females</u> | | |
| TC Treatment | 246 | 17.9 |
| Counseling Treatment | 113 | 29.2 |
| No-Treatment | 38 | 23.7 |
| Chi Square Probability | | 5.95 < .05 |

8138B:nm

Figure 1

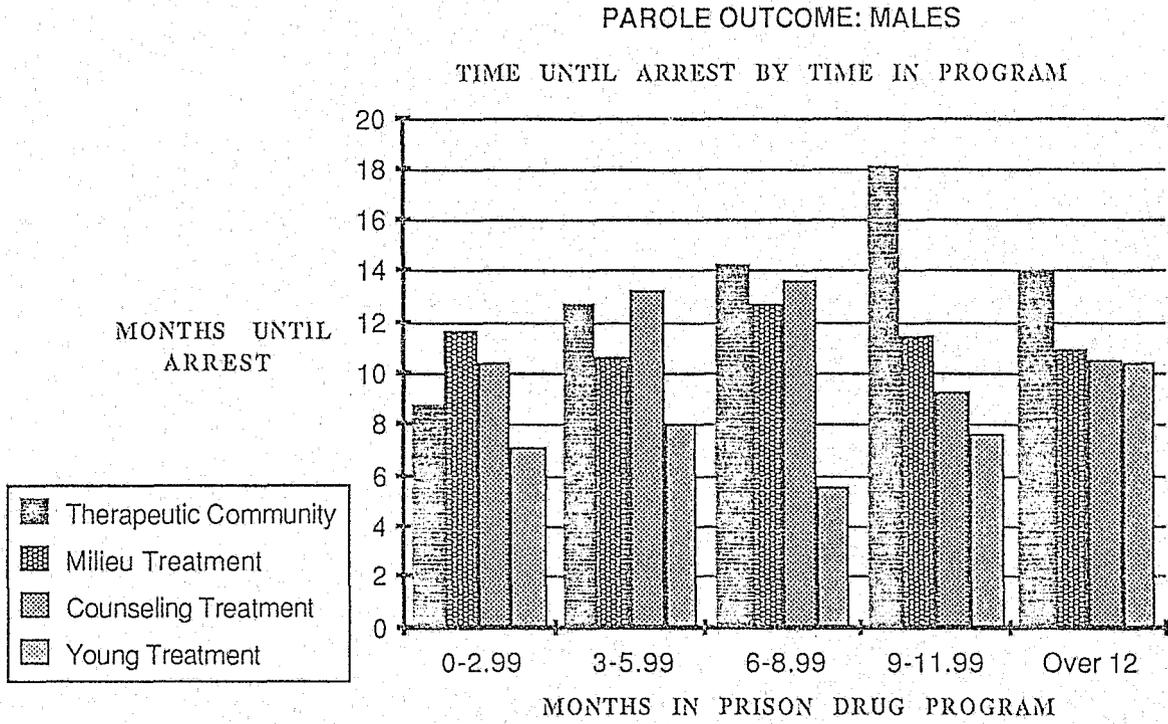


Figure 2

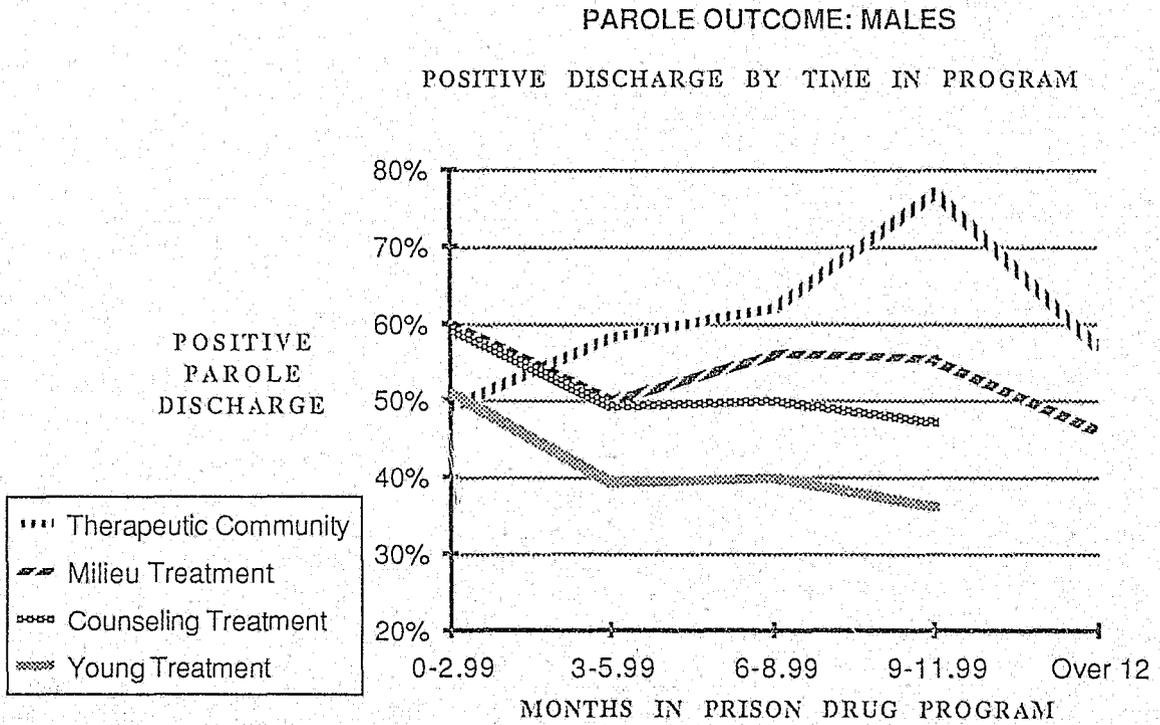
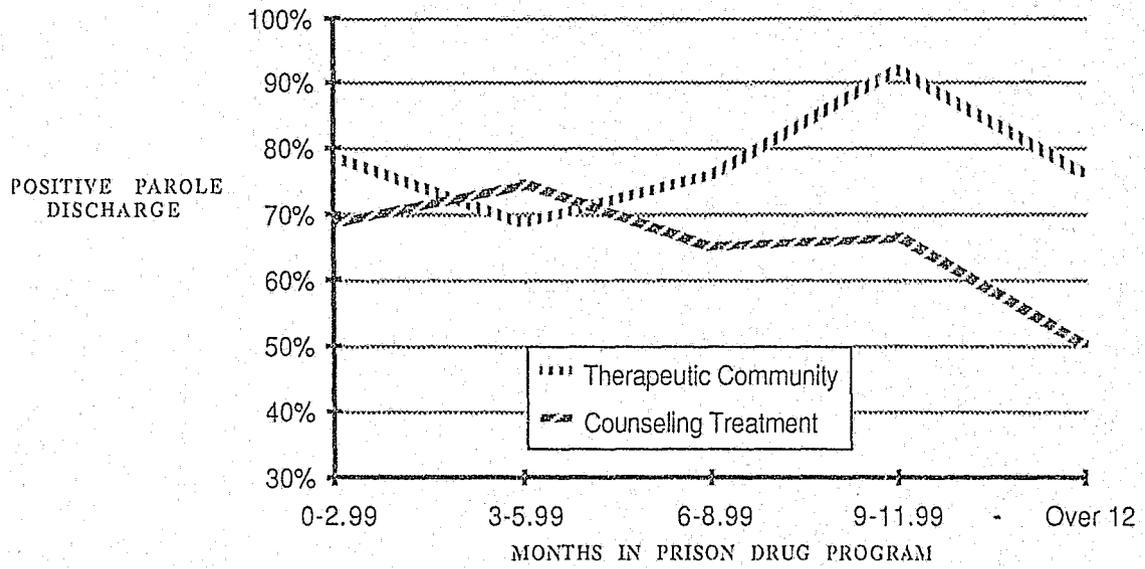


Figure 3

PAROLE OUTCOME: FEMALES

POSITIVE DISCHARGE BY TIME IN PROGRAM



REFERENCES

- Adams, S., Evaluative research in corrections: A practical guide. Washington, D.C.: U.S. Department of Justice. 1975.
- Bailey, W.C., Correctional outcome: an evaluation of 100 reports. Journal of Criminal Law, Criminology and Police Sciences. 57: 153-160, 1966.
- Bureau of Justice Statistics Bulletin. Prisoners and Drugs, by Kalish, C.B., Masumura, W.T. Washington, D.C.: Supt. of Docs., U.S. Govt. Print. Off., 1983.
- Bale, R.N., Outcome research in therapeutic community for drug abusers: A critical review. International Journal of the Addictions. 14 (8) 1053-1074, 1969.
- Ball, J.C., Shaffer, J.W., and Nurco, D. N., Day to day criminality of Heroin Addicts in Baltimore--A study in the continuity of offense rates. Drug and Alcohol Dependence, 1983, 12, 119-142.
- De Leon, G. The therapeutic community : Study of effectiveness. Internal report submitted to the National Institute on Drug Abuse, 1979.
- De Leon, G. The therapeutic community: Study of effectiveness. Treatment Research Monograph Series, National Institute on Drug Abuse, 1984.
- De Leon, G., Holland, S., and Resenthal, M.S. Phoenix House: Criminal activity of drop-outs. Journal American Medical Association, 226(6), 686-689, 1972.
- De Leon, G., Andrews, M., Wexler, H .K., Jaffe, J., and Rosenthal, M.S. Therapeutic community drop-outs: Criminal behavior five years after treatment. American Journal of Drug and Alcohol Abuse, 6(3), 253-271, 1979.
- Des Jarlais, D., and Wexler, H.K., Internal Report for the New York State Division of Substance Abuse Services, 1979.
- Gropper, B.A. Probing the Links Between Drugs and Crime. Washington, D.C: National Institute of Justice, 1985.
- Holland, S., Gateway House: Effectiveness of treatment on criminal behavior. International Journal of Addictions, 13(5), 369-381.
- Inciardi, J. A. Heroin use and street crime. Crime and delinquency, (July), 333-346, 1979.
- Johnson, B., Goldstein, P., Preble, E., Schmeidler, J., Lipton, D.S., Spunt, B., and Miller, T., Taking Care of Business: The Economics of Crime by Heroin Abusers, Lexington Books, Lexington, Massachusetts, 1985.
- Lipton, D., Martinson, R., and Wilks, J. The effectiveness of correctional treatment, New York: Preagar Publishers, 1975.

- Nash, G., The impact of drug abuse treatment upon criminality: A look at 19 programs. Monclair State College, Upper Monclair, New Jersey, 1973.
- NIDA, Treatment Research Report Series. Drug abuse treatment in Prisons. DHHS Publication NO. (ADM) 81-1149, 1981.
- Sells, S. B., Simpson, D., Joe, G., Demaree, R., Savage, L., and Lloyd, M. A national follow-up study to evaluate the effectiveness of drug abuse treatment: A report of cohort 1 of the DARP five years later, American Journal of Drug and Alcohol Abuse, 3(4): 545-556, 1976.
- Simpson, D. D. Follow-up outcomes and length of the time spent in treatment for drug abuse. Institute of Behavioral Research, Texas Christian University, Ft. Worth, Texas, 1980.
- System, Sciences, Inc., A comparative analysis of twenty-four therapeutic communities in New York City funded by the Addiction Services Agency of the City of New York. Prepared under contract registration # 903821. December 1973.
- Wexler, H. K. and Chin, J. Evaluation of a system to evaluate prison based drug treatment. Presented at the Eastern Evaluation Research Society Conference, Philadelphia, Pennsylvania, May 1981.
- Wexler, H. K. and Lostlen, V. A. Implementation of a prison therapeutic community for substance abusers: An environmental evaluation. Presented at the Eastern Psychological Association, Philadelphia, Pennsylvania, April, 1979.
- Wilson, S. and Mandelbrot, B., Criminal activity after treatment in a therapeutic community for drug abusers. Unpublished manuscript, Littlemore Hospital, Oxford, England, 1977.