Predicting Recidivism in a Maximum Security Correctional Institution: Some Emerging Generalizations

Massachusetts Department of Correction

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October, 1966

Approved by Alfred C. Holland
Publication Number 602

Introduction

The primary goal of this report is to derive the base expectancy categories for a sample of those released to the community from the Mass. Correctional Institution, Walpole, a maximum security correctional institution. Base expectancy categories are a type of prediction table. Each category includes a cluster of variables which is associated with a particular recidivism rate. Usually, eight to ten categories can be derived, depending upon the size of the sample. The base expectancy categories, therefore, spotlight the type of inmate that is most likely to become a recidivist, as well as the type that is least likely to become one. Further, several intermediate categories with varying probabilities for recidivism are provided.

The Massachusetts Department of Correction has recently been developing a substantial body of data relevant to recidivism in the correctional institutions under its auspices. Base expectancy categories have already been derived for two of the major male institutions--the Massachusetts Correctional Institution, Concord, the maximum security institution for younger offenders[1] and the Mass. Correctional Institution, Norfolk, the medium security institution.[2] Also, at the Mass. Correctional Institution, Framingham, the adult female institution, two complementary studies have been done. In the first study, base expectancy categories were established for those who were paroled from this institution.[3] The second study focused on the derivation of these categories for drunkenness offenders, who represent a substantial segment of the overall

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[1] Ralph Metzner and Gunther Weil, "Predicting Recidivism: Base Rates for Mass. Correctional Institution, Concord," J. Crim. Law, Criminology, and Police Science (Sept., 1963) PP. 307-316.

[2] Francis J. Carney, "Base Expectancy Categories for Offenders at the Mass. Correctional Institution, Norfolk," Dept. of Correction: mimeographed (June, 1966)

[3] Barbara DeVault and David Haughey, "Base Expectancy Categories for Predicting Parole Failure," Dept. of Correction: mimeographed (June 28, 1965)

population at the Mass. Correctional Institution, Framingham, and who are not, by law, released on parole (i.e., there is no formal supervision of drunkenness offenders after their release to the community).[4]

The present report should, therefore, contribute to this burgeoning body of knowledge related to recidivism in the Mass. Correctional Institutions. An attempt will be made in the course of this study to compare the findings of the present investigation with those of the aforementioned studies. Special attention will be directed to the similarities and differences between the data of this study and the Norfolk data, since these two studies tend to be the most comparable ones in terms of certain methodological consideration--e.g., the follow-up period for determining recidivism is the same in only the Norfolk and the present studies.

The major uses of base expectancy categories have been detailed in an earlier report.[5] Briefly, these categories are suited to play an important role as an adjunct in many different decision making contexts--e.g., parole decisions, classification decisions, treatment decisions, transfer decisions, etc. Also, for research purposes the base expectancy categories are extremely valuable. For example, they spotlight the salient variables which must be controlled in the empirical evaluation of treatment programs, policy changes, or any innovation affecting the institution. By controlling the factors most predictive of recidivism and non-recidivism, a researcher is able to provide a much more meaningful evaluation of the impact of such treatment programs or policy changes. For instance, if a significant difference in recidivism were found between participants and non-participants in a treatment program, the researcher could, by matching participants and non-participants on these highly predictive variables, tell whether the difference was actually due to

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[4] Francis J. Carney, "Base Expectancy Categories for Predicting Recidivism of Female Drunkenness Offenders: Combined Data, "Division of Legal Medicine: mimeographed (August 30, 1965)

[5] Carney, "Base Expectancy Categories for Offenders at MCI-Norfolk," op. cit.: pp. 2-4

the impact of the treatment program or to a process of self-selection--i.e., those who are most likely to be non-recidivists might have been the ones who had participated in the treatment program in the first place. Also, by using this matching procedure it is possible to indicate, in a rather clear fashion, what type of individual is most likely to benefit from participation in a particular treatment program, and what type is likely to do just as well (or just as poorly) without it.[6]

There seems to be a general consensus among experts in the field of corrections regarding the usefulness of prediction devices such as the base expectancy categories. In 1962, Victor H. Evjen conducted a survey in which he asked leading criminologists, prison administrators, and parole board members their opinions about prediction devices.[7] He reported that 75 percent of the respondents believed in the value of prediction tables. The other 25 percent did not necessarily think that prediction tables were useless. Rather, they had some reservations which primarily revolved around the possible misuse of these tables. For example, some respondents felt that there might be a tendency on the part of decision makers to rely solely on prediction tables. It should be emphasized, therefore, that the base expectancy categories being developed by the Mass. Department of Correction are not meant to be the last word in any decision making context. Rather, their function in this area is to serve as one of several guides which aid in making decisions. Perhaps their most important function, however, is the crucial role they play in the context of evaluative research.

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[6] This type of an evaluation was done on the group therapy program for Alcoholics at MCI-Framingham. See Francis J. Carney, "An Evaluation of the Group Therapy Program for Alcoholics," Div. of Legal Medicine: mimeographed (Sept. 10, 1965)

[7] Victor H. Evjen, "Current Thinking on Parole Prediction Tables," Crime and Delinquency (July, 1962) pp. 215-38

The case for the development of prediction devices in the correctional field has been emphatically stated by J. Douglas Grant, Chief of the Research Division of the California Department of Corrections. He wrote, "Any correctional agency not using a prediction procedure to study the effectiveness of its decisions and operations is perpetrating a crime against the taxpayer."[8] Grant went on to say that this statement is no longer "a merely theoretical argument." He cited several studies in his article which provided empirical evidence to support the following contentions:

> 1. Experience is not enough, systematic self-study is essential to correctional effectiveness.
>
> 2. Correctional Agencies are spending millions collecting information and millions making decisions, although these functions have had little influence on each other.
>
> 3. Systematic study can develop prediction devices which will hold up for at least several years.
>
> 4. While correctional programs are rehabilitating some kind of offenders, they are in fact increasing the criminal activity of other kinds of offenders.
>
> 5. Correctional agencies are spending public funds on "good risks" who do not need the program in order to perform satisfactorily. Furthermore, these "good risks" are receiving more than their share of the available program budget.
>
> 6. The fact that a correctional agency relies on subjective decisions rather than on statistical formulas in no way excuses it from accountability for the effectiveness of its decisions. A question that should be empirically determined is: Which combinations of information and procedures (including use of subjective decisions) prove most effective?[9]

These crucial issues clearly spotlight the need for the development of prediction devices. Therefore, without further ado, attention will be turned to the task at hand--the derivation of base expectancy categories for offenders at MCI-Walpole.

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[8] J. Douglas Grant, "It's Time to Start Counting," Crime and Delinquency (July, 1962) p. 259

[9] ibid., p. 259

Method

The Sample. The sample consisted of all inmates who were released from MCI-Walpole to the community during the year of 1960. The Norfolk study was also based on a 1960 sample. The Concord study, however, was done on a 1959 sample. There were 155 subjects in the present study, as opposed to 363 in the Norfolk study and 311 in the Concord study.

Comparison of the Walpole, Norfolk, and Concord Samples. It was felt that an important aspect of the description of the present sample would be a comparison with the Norfolk and Concord samples. If the samples were significantly different in terms of the variables analyzed, then different base expectancy categories might be expected for each institution. Conversely, if the samples were similar, then similar base expectancy categories would be expected. Perhaps the most significant outcome would occur in a situation where the samples were significantly different and the base expectancy categories were similar. Such an outcome would raise the possibility of deriving a "universal prediction table" which would be valid despite differences in inmate populations.

In Appendix A, a comparison of the Walpole, Norfolk, and Concord samples is presented. In the discussion that follows, a closer look will be taken at the differences and similarities between the Walpole and Norfolk samples. Table I (p. 17) includes those variables on which these two samples were significantly different. Note that the samples were different at a statistically significant level on nine of the fourteen variables analyzed. These were: (1) race, (2) age at present commitment, (3) type of offense, (4) prior penal commitments, (5) number of prior arrests, (6) behavior disorders, (7) home contacts, (8) type of home to which released, and (9) type of release. The five variables on which the two samples were not

significantly different were: (1) age at first arrest, (2) length of present commitment, (3) institutional conduct, (4) military record, and (5) community to which released.

The general conclusion that emerged from this comparison of the Walpole and Norfolk samples was that the two samples are quite different and that, as expected,* the more serious type of offender tends to be committed to Walpole. In support of this, it was found that significantly more inmates at Walpole had previous commitments to correctional institutions. Also, Walpole inmates had significantly more prior arrests and manifested a significantly greater degree of behavior disorders--e.g., alcoholism, drug addiction. Further, the Walpole subjects were younger at their first arrest, served longer sentences on their present commitment, and had more "good time" withheld while in the institution, although none of these three differences reached the accepted level for statistical significance. Another indication that the more serious offenders were at Walpole was that significantly fewer inmates were paroled from there.

The fact that there were significantly more non-whites at Walpole may be explained by the policy that Norfolk does not ~~receive~~ knowingly accept any narcotic offenders. Of the 22 narcotic offenders at Walpole, 19 (86.4%) were non-white (17 Negroes and 2 Orientals). This administrative policy also contributed to the significant difference between the two samples in terms of the types of offenses for which inmates were committed. While none of the 363 Norfolk subjects were narcotic offenders, 14.2% of the Walpole sample consisted of this type of offender. (It is likely that the percentage of addicts and former addicts is higher than this figure, since there are probably additional inmates who have records of addiction, but who were committed for other offenses.

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*This finding is to be expected inasmuch as Walpole is a maximum security institution, while Norfolk is medium security.

These, also, would not be eligible for transfer to Norfolk.) Also, with respect to the offenses for which inmates were committed, it should be noted that the Walpole sample included significantly fewer offenders against property and significantly more parole violators.

Table II provides a more detailed breakdown of the offenses for which inmates in both samples were committed. Also the reddivism rate for each offense is included.

Table II

A Comparison of the Walpole and Norfolk Samples in Terms of the Type of Offense and Including the Recidivism Rate for Each Offense

Offense	Walpole N(%)	Walpole Recid. Rate	Norfolk N(%)	Norfolk Recid. Rate	Total N(%)	Total Recid. Rate
Offense vs. person	34 (21.9)	67.6%	92 (25.3)	53.3%	126 (24.3)	57.1%
Sex vs. minor	17 (11.0)	41.2%	41 (11.3)	26.8%	58 (11.2)	31.0%
Sex vs. major	2 (1.3)	50.0%	8 (2.2)	37.5%	10 (1.9)	40.0%
Offense vs. Prop.	20 (12.9)	65.0%	94 (25.9)	66.0%	114 (22.0)	65.8%
Forgery	6 (3.9)	66.7%	17 (4.7)	41.2%	23 (4.4)	47.8%
Auto Theft	0 (0.0)	-	10 (2.8)	70.0%	10 (1.9)	70.0%
Narcotic off.	22 (14.2)	77.3%	0 (0.0)	-	22 (4.2)	77.3%
Parole violation	41 (26.5)	73.8%	56 (15.4)	58.9%	97 (18.7)	64.9%
Other offenses	4 (2.6)	0.0%	6 (1.7)	16.7%	10 (1.9)	10.0%
Comb. of offenses	9 (5.8)	88.9%	39 (10.7)	64.1%	48 (9.3)	68.7%
Total	155 (100.1)	67.1%	363 (100.0)	54.5%	518 (99.8)	58.1%

Of those categories which represent at least 10 per cent of the respective samples, sex offenders against minors had the lowest recidivism rate at both Walpole and Norfolk. Using this same criterion, narcotic offenders had the highest recidivism rate at Walpole, while property offenders had the highest rate at Norfolk.

One other statistic should be noted here. The average length of the present commitment for the Walpole inmates was 2 years, 2 months, 15 days, as opposed to 2 years, 2 months, 5 days for the Norfolk inmates. Thus, on the average, Walpole inmates were incarcerated for 10 days longer than their counterparts at Norfolk. 43% of the Walpole subjects were in prison for two years or more for their present offense, while 36% of the Norfolk subjects were in prison for this long. These data indicate that the length of time actually spent in prison is not significantly different for the two samples, although the Walpole inmates tend to be incarcerated for somewhat longer.

Data Collection. Data for this study were collected by members of the social service staff at MCI-Walpole. The variables analyzed were the same as those in both the Norfolk and the Concord studies. These fourteen variables are found in Appendix A.

Information was also collected on whether or not a subject participated in the treatment programs of the counseling service. However, since there were only 15 subjects who had participated in therapy programs and since this factor was not a part of the Norfolk or Concord analyses, it was decided that this variable would not be included in the derivation of base expectancy categories for the Walpole sample.

Follow-up Period and the Criterion of Success. The follow-up period was four years. As indicated earlier, this was the same as the Norfolk study, but not the same as the Concord study which was two and a half years. Any subject who was committed to a Mass. Correctional Institution, or House of Correction for one month or longer, was considered a recidivist. Those who were held in a jail or House of Correction for less than one month were not defined as recidivists in this study. Table III indicates the time within which the 104 recidivists were returned, as well as the proportion who were parole violators.

Table III

Time Within Which Recidivists Were Re-Committed

Length of Time Before Re-commitment	N	(%)	Cumulative %	% Who Were Parole Violators
Within 1 month	6	(5.8)	5.8%	50.0%
1-6 mos.	29	(27.9)	33.7%	62.1%
6 mos.- 1 yr.	29	(27.9)	61.6%	41.4%
1-2 yrs.	23	(22.1)	83.7%	47.8%
2-4 yrs.	17	(16.3)	100.0%	41.2%
Total	104	(100.0)		49.0%

Table III shows that slightly more than 6 out of 10 subjects who will become recidivists within four years do so within the first year after their release. This finding was very similar to that of the Norfolk study. In fact, the data in Table III are almost identical to the Norfolk data on these dimensions, except for the fact that more of the early recidivists, and fewer of the later recidivists, were parole violators in the Norfolk sample. However, the overall proportion of recidivists who were parole violators -- i.e. about one half-- was just about the same in both studies.

Statistical Analysis. The statistical tool used in the derivation of base expectancy categories is called successive dichotomization. According to this technique, the sample was divided into two subgroups on each of the fourteen variables analyzed--e.g. for the variable age at present commitment the subgroups might be those 29 and younger vs. those 30 and older. Then a recidivism rate was derived for each of the two subgroups of the 14 variables. The variable whose subgroups discriminated best between recidivists and nonrecidivists was selected, and the procedure was continued with the selected subgroups until the N's became

too small to produce meaningful results. To use the example of age at present commitment again, it may happen that those 29 and younger had a recidivism rate of 75%, while those 30 and older had a rate of 25% on the first breakdown. If this were the most discriminating variable, it would be chosen and the process continued with these two groups. In order to determine the variable whose subgroups were most discriminating on each breakdown, a chi-square was computed. The variable whose subgroups resulted in the most significant chi-square was selected on each breakdown. In this study the chi-squares for each variable on the first breakdown will be presented so that the relative power of each factor to discriminate between recidivists and non-recidivists will be spotlighted.

Results

The recidivism rate for the entire sample was 67.1%. This is significantly higher than the Norfolk rate of 54.5% ($X^2 = 6.33$, df = 1, $p < .02$). It is also significantly higher than the Concord rate which was 55.9% ($X^2 = 5.34$, df = 1, $p < .05$). However, it is stressed again that the follow-up period for the Concord study was $1\frac{1}{2}$ years shorter than that of the other two. It may be possible to provide a rough estimate of what the Concord recidivism rate would have been with a four year follow-up period, based on the Walpole and Norfolk data. Consider that within two years, 83.7% of the Walpole recidivists and 78.8% of the Norfolk recidivists had been returned to prison. From these figures it may be estimated that about 90% of the Concord recidivists had been returned in the $2\frac{1}{2}$ year follow-up period. This would mean that the projected recidivism rate for the four year follow-up would be approximately 61.5%--a return rate which is not significantly different from that of Walpole.

Table IV (p. 18) presents the data which have been analyzed by the technique of successive dichotomization. Nine categories with return rates ranging from 11.1% to 100.0% were derived from the following predictive variables:

(1) prior penal commitments, (2) age at present commitment, (3) age at first arrest, and (4) behavior disorders. These nine base expectancy categories are given in Table V (p. 19).

An examination of the base expectancy categories in Table V indicates that gaps in the recidivism rates between categories 3 and 4 and between categories 5 and 6 make it possible to divide the entire sample into three general risk groups--good risks, average risks, and poor risks. The good risk group, which includes categories 1-3, has a recidivism rate (36.4%) that is significantly lower than the rate of the total sample. The average risk group, including categories 4(a), 4(b), and 5, has a recidivism rate (68.9%) which is almost equal to the overall rate. Finally, the poor risk group--categories 6-8--has a return rate (86.4%) significantly higher than that of the total sample. Table VI presents the data on these three risk groups.

Table VI

General Risk Groups

Group	N	% of Sample	Recidivism Rate
Good Risk	44	28.4%	36.4%
Average Risk	45	29.0%	68.9%
Poor Risk	66	42.6%	86.4%
Total	155	100.0%	67.1%

It might be argued that these three general risk groups are somewhat more meaningful than the nine specific categories. One reason for this contention is the relatively small sample in this study which may suggest that the derivation of nine categories might be "over-refining" the analysis ~~a bit~~. At any rate, both are presented here so that the personnel at Walpole may use either one or the other, or, perhaps more appropriately, both.

In Appendix B, the chi-squares for the first breakdown are presented. It is noteworthy that the most powerful variable in terms of discriminating

between recidivists and non-recidivists was participation vs. non-participation in the treatment programs of the counseling service. However, for reasons noted above, this factor was not included in the derivation of the base expectancy categories. Of the fourteen variables used in the derivation of these categories, four factors discriminated between recidivists and non-recidivists at a statistically significant level. These factors are, in the order of their significance: (1) prior penal commitments, (2) number of prior arrests, (3) age at present commitment, and (4) age at first arrest. It is interesting to note that these factors were also the four most significant variables in terms of discriminating between recidivists and non-recidivists in the first breakdown of the Norfolk study.

It may be possible to take a closer look at the finding that participation in the counseling program was the most discriminating variable, by utilizing the general risk groups. Table VII presents a comparison of participants and non-participants, holding constant the risk group. This table shows that the same number of subjects were in the good risk group as were in the poor risk group. Therefore, it does not seem that there was a selective factor operating here since there was no preponderance of counseling participants in the good risk group.

Table VII

A Comparison of Recidivism Rates of Participants and Non-Participants of Counseling Program, Holding Risk Group Constant

	In Counseling Program		Not in Counseling Program		Total	
Risk Group	N	Recid. Rate	N	Recid.Rate	N	Recid.Rate
Good	7	0.0%	37	43.2%	44	36.4%
Average	1	0.0%	44	70.5%	45	68.9%
Poor	7	75.4%	59	88.1%	66	86.4%
Total	15	33.3%	140	70.0%	155	67.1%

Table VII shows that for each of the risk groups the counseling participants had a lower recidivism rate than their counterparts who were non-participants. In fact, when the good and average risk groups are merged, the participants' recidivism rate is lower than the non-participants at a statistically significant level ($\chi^2 = 9.84$, df = 1, $p < .01$). The difference between the recidivism rates of the participants and non-participants in the poor risk group does not reach the accepted level for statistical significance. It does seem, however, that, based on this very small number of counseling participants, the treatment program does have some impact in terms of lowering the recidivism rate.

One other finding of interest should be mentioned here. This has to do with the length of the present commitment. As was pointed out earlier, the average time spent in prison for the total sample was 2 years, 2½ months. The average stay in prison for the recidivists was only 1 year, 11 months, and 10 days, while the average for non-recidivists was 2 years, 9 months. Thus, on the average, the non-recidivists were incarcerated for 9 months and 20 days longer than the recidivists. This finding is consistent with the Norfolk study in which the non-recidivists averaged 7 1/3 months longer than the recidivists in prison.

Discussion

An analysis of all the base expectancy studies done by the Mass. Department of Correction reveals an emerging pattern. There were certain parallels among these studies in terms of what were found to be the predictive variables--especially on the very important first and second breakdowns. The crucial factors for predicting recidivism tend to be the combination of prior record and age at present commitment. A summary of the predictive factors for each of the base expectancy studies is presented in Table VIII. An asterisk (*) indicates that the variable was most predictive on either the first or second breakdown.

Table VIII

A Summary of the Predictive Variables for All Base Expectancy Studies

	Male Institutions			Female Institutions	
	Walpole	Norfolk	Concord	Framingham Parolees	Framingham Drunkenness Offenders
Age at Present Comm.	X*	X*	X	X*	X
Prior Commitments	X*	X*	X*		X*
Type of Offense		X	X*	X	
Prior Arrests			X*	X*	
Age at First Arrest	X*	X			
Behavior Disorders	X			X	
Length of Pres. Comm.		X			X
Race			X	X	
Marital Status[1]				X	X*
Family Alcoholism[2]					X*
Voluntary vs. Court Commitment (Drunkenness Offenders Only)[2]					X

[1] Used only in Framingham studies.

[2] Used only in Framingham drunkenness offender study.

Table VIII shows that age at present commitment was a predictive variable in all five studies. Further, it was predictive on the first or second breakdown in the Walpole, Norfolk, and Framingham (parolees) studies. The fact that Concord--an institution for younger offenders--has a relatively homogeneous population in terms of age may have rendered age at present commitment somewhat less discriminating for that sample. Also, the female drunkenness offenders at Framingham are a special group with which other variables become somewhat more predictive than age.

Table VIII also shows that prior commitments was a very important variable in terms of discriminating between recidivists and non-recidivists. It was included as a predictive factor on the first or second breakdown in four of the five studies. In the fifth study--Framingham (parolees)--the most discriminating variable was prior arrests, which taps essentially the same dimension--i.e. prior record. Prior record was, therefore, the most discriminating variable--i.e. most significant on the first breakdown--in four of the five studies. (In the Norfolk study age at present commitment was the most discriminating variable and prior commitments was second--i.e. most significant on the second breakdown).

The generalization that emerges from these findings is that older offenders with relatively short and/or less serious records tend to be the best risks in terms of recidivism for all the institutions. Conversely, younger offenders with relatively long and/or more serious records tend to be the poorest risks. The two intermediate groups--i.e. older offenders with relatively long and/or more serious records and younger offenders with relatively short and/or less serious records--tend to have recidivism rates close to the overall rate in the respective institutions. For these two groups further breakdowns are necessary in order to divide them into categories which achieve greater discrimination in terms of predicting them likelihood of recidivism. Table IX summarizes this general discovery in tabular form. (In this table a plus sign stands for a good risk, a minus sign for a poor risk, and a combination plus and minus sign for an average risk).

Table IX

General Risk Groups Based on the Most Predictive Variables of All Base Expectancy Studies

	Short or Less Serious Record	Long or More Serious Record
Older	+	±
Younger	±	-

Based on those preliminary findings it would seem that the derivation of the aforementioned "universal prediction table" is a possibility. The similarities in the predictive variables which have been discovered among these different correctional institutions are certainly worthy of further investigation. The importance of these similarities lies not only in their practical applications, but also in the theoretical implications that are involved. If future research were to support the present findings, then it may be possible to construct a "universal prediction table" that would be valid for all institutions in spite of differences in the type of institution--e.g. maximum and medium security--and in the type of inmates--e.g. males and females. Also, further study along the lines of the present investigation would likely result in a significant contribution to the development of theoretical formulations which would aid in the understanding of recidivism in particular and of crime and deviance in general.

Summary

The base expectancy categories for a sample of 155 Walpole inmates have been presented. In the course of the report the need for such predictive devices, as well as some possible uses of them, was mentioned. A comparison of the base expectancy categories of the present investigation with those of previous studies revealed some striking similarities. Further research along these lines was urged because of the potential payoff in terms of practical as well as theoretical concerns.

Table I

Variables on Which the Walpole and Norfolk Samples Are Significantly Different

Variable	Norfolk N=363	Walpole N=155	Difference	Total N=518
Race				
White	299 (82.4)	104 (67.1)	$X^2 = 14.67$	403 (77.8)
Non-White	64 (17.6)	51 (32.9)	$p < .001$	115 (22.2)
Age at Pres. Comm.				
Mean	30.0	32.5	$t = 2.56$	30.7
Sigma	10.24	9.88	$p < .02$	10.22
Type of Offense				
Against Person	141 (38.8)	53 (34.2)		194 (37.5)
Against Property	121 (33.3)	26 (16.8)	$X^2 = 71.16$	147 (28.4)
Parole Violation	56 (15.4)	41 (26.5)	$df = 4$	97 (18.7)
Narcotics Offense	0 (0.0)	22 (14.2)	$p < .001$	22 (4.2)
Other or Combination	45 (12.4)	13 (8.4)		58 (11.2)
Prior Penal Commitments				
No prior H. of C. or MCI Comms.	118 (32.5)	27 (17.4)	$X^2 = 12.27$	145 (28.0)
Prior H. of C. or MCI Comm(s).	245 (67.5)	128 (82.6)	$p < .001$	373 (72.0)
No. of Prior Arrests				
5 or Fewer	127 (35.0)	34 (21.9)	$X^2 = 12.00$	161 (31.1)
6 or More	236 (65.0)	121 (78.1)	$p < .001$	357 (68.9)
Behavior Disorders				
None	230 (63.4)	73 (47.1)	$X^2 = 11.83$	303 (58.5)
Alcoholism, Drug Addiction, Etc.	133 (36.6)	82 (52.9)	$p < .001$	215 (41.5)
Home Contacts				
Regular or Frequently	164 (45.2)	100 (64.5)	$X^2 = 16.25$	264 (51.0)
None or Occasional	199 (54.8)	55 (35.5)	$p < .001$	254 (49.0)
Type of Home to Which Released				
With Family or Relatives	263 (72.5)	90 (58.1)	$X^2 = 10.36$	353 (68.1)
Alone or with Friends	100 (27.5)	65 (41.9)	$p < .01$	165 (31.9)
Type of Release				
Paroled	276 (76.0)	105 (67.7)	$X^2 = 3.84$	381 (73.6)
Discharged	87 (24.0)	50 (32.3)	$p = .05$	137 (26.4)

Table IV — DERIVATION OF BASE EXPECTANCY CATEGORIES

Total Sample N=155 67.1% Return

- No Prior Penal Commitments (including Juvenile) N=21 42.9% Return
  - 30 or Older at Present Commitment — N=9 11.1% Return
  - 29 or Younger at Present Commitment — N=12 66.7% Return
- Some Prior Penal Commitments (including juvenile) N=134 70.9% Return
  - 20 or Older at First Arrest N=31 54.8% Return
    - 40 or Older at Present Commitment — N=13 38.5% Return
    - 39 or Younger at Present Commitment — N=18 66.7% Return
  - 19 or Younger at First Arrest N=103 75.7% Return
    - No Behavioral Disorders N=47 63.8% Return
      - 15-19 Years Old at First Arrest — N=22 45.5% Return
      - 14 or Younger at First Arrest — N=25 80.0% Return
    - Some Behavioral Disorders i.e. Alcoholism, Drug Addiction, etc. N=56 85.7% Return
      - 35 or Older Present Commitment — N=15 73.3% Return
      - 34 or younger at Pres. Comm. N=41 90.2% Return
        - 14 or younger at First Arrest N=21 81.0% Return
        - 15-19 at First Arrest N=20 100.0% Return

Table V

Base Expectancy Categories

	Description	N	% of Sample	Return Rate
1.	No prior penal commitments (incl. Juv.), 30 or older at pres. comm.	9	5.8%	11.1%
2.	Prior penal comm(s). (incl. juv.), 20 or older at first arrest, 40 or older at pres. comm.	13	8.4%	38.5%
3.	Prior penal comm(s). (incl. juv.); 15-19 years old at first arrest, No behavioral disorders	22	14.2%	45.5%
4(a).	No prior penal comms. (incl. juv.) 29 or younger at pres. comm.	12	7.7%	66.7%
4(b).	Prior penal comm(s). (incl. juv.) 20 or older at first arrest	18	11.6%	66.7%
5.	Prior penal comm(s). (incl. juv.) 19 or younger at first arrest Some behavioral disorder(s) 35 or older at pres. comm.	15	9.7%	73.3%
6.	Prior penal comm(s). (incl. juv.) 14 or younger at first arrest No behavioral disorders	25	16.1%	80.0%
7.	Prior penal comm(s). 14 or younger at first arrest Some behavioral disorders(s) 34 or younger at pres. comm.	21	13.5%	81.0%
8.	Prior penal comm(s). (incl. juv.) 15-19 years old at first arrest Some behavioral disorder(s) 34 or younger at pres. comm.	20	12.9%	100.0%
	Total	155	99.9%	67.1%

APPENDICES

APPENDIX A

Comparison of the Norfolk, Walpole, and Concord Samples

Variable	Norfolk N=363	Walpole N=155	Concord N=311	Total N=829
Race				
White	299 (82.4)	104 (67.1)	252 (81.0)	655 (79.0)
Non-White	64 (17.6)	51 (32.9)	59 (19.0)	174 (21.0)
Age at Present Commitment				
24 or younger	139 (38.3)	30 (19.2)	197 (63.3)	366 (44.1)
25 or older	224 (61.7)	135 (80.8)	114 (36.7)	473 (55.9)
Age at First Arrest				
19 or younger	244 (67.2)	113 (72.9)	257 (82.6)	614 (74.1)
20 or older	119 (32.8)	42 (27.1)	54 (17.4)	215 (25.9)
Type of Offense				
Against Person	141 (38.8)	53 (34.2)	112 (36.0)	306 (36.9)
Against Property	121 (33.3)	27 (17.4)	72 (23.2)	220 (26.5)
Technical Parole Violation	56 (15.4)	41 (26.5)	69 (22.2)	166 (20.0)
Other	45 (12.4)	34 (21.9)	58 (18.6)	137 (16.5)
Prior Penal Commitments				
No Prev. H.of C. or MCI Comms.	118 (32.5)	27 (17.4)	107 (34.4)	252 (30.4)
Prev. H.of C. or MCI Comm(s).	245 (67.5)	128 (82.6)	204 (65.6)	577 (69.6)
No. of Prior Arrests				
5 or fewer	127 (35.0)	34 (21.9)	138 (44.4)	299 (36.1)
6 or more	236 (65.0)	121 (78.1)	173 (55.6)	530 (63.9)
Length of Present Commitment				
Less than 2 years	232 (63.9)	89 (57.4)	254 (81.7)	575 (69.4)
2 years or more	131 (36.1)	66 (42.6)	57 (18.3)	254 (30.6)
			235 (75.6)	
Institutional Conduct			76 (24.4)	
No Good Time Withheld	300 (82.6)	117 (75.5)		652 (78.6)
Some Good Time Withheld	63 (17.4)	38 (24.5)		177 (21.4)

Variable	Norfolk N=363	Walpole N=155	Concord N=311	Total N=829
Behavior Disorders				
None	230 (63.4)	73 (47.1)	229 (73.6)	532 (64.2)
Alcoholism, Drug Addiction, etc.	133 (36.6)	82 (52.9)	82 (26.4)	297 (35.8)
Military Record				
No Military Service	198 (54.5)	77 (49.7)	191 (61.4)	466 (56.2)
Honorable Discharge	103 (28.4)	46 (29.7)	63 (20.3)	212 (25.6)
Dishonorable, Undesirable, or Medical Discharge	62 (17.1)	32 (20.6)	57 (18.3)	151 (18.2)
Home Contacts				
Regular or Frequently	164 (45.2)	100 (64.5)	136 (43.7)	400 (48.3)
None or Occasional	199 (54.8)	55 (35.5)	175 (56.3)	429 (51.7)
Type of Home to Which Released				
With Family or Relatives	263 (72.5)	90 (58.1)	263 (84.6)	616 (74.3)
Alone or with Friends	100 (27.5)	65 (41.9)	48 (15.4)	213 (25.7)
Community to Which Released				
Urban	313 (86.2)	138 (89.0)	257 (82.6)	708 (85.4)
Non-Urban	50 (13.8)	17 (11.0)	48 (15.4)	115 (13.9)
Unknown			6 (1.9)	6 (0.7)
Type of Release				
Paroled	276 (76.0)	105 (67.7)	235 (75.6)	616 (74.3)
Discharged	87 (24.0)	50 (32.3)	76 (24.4)	213 (25.7)

APPENDIX B

CHI-SQUARES FOR FIRST BREAKDOWN

Table 1*

Participation in Counseling Program

	Participant N=15	Non-Participant N=140	Total N=155
Non-Recidivists	10 (66.7)	41 (29.3)	51 (32.9)
Recidivists	5 (33.3)	99 (70.7)	104 (67.1)

$X^2 = 8.58$, df = 1, $p < .01$

Table 2

Prior Penal Commitments

	No Prev. Comms. (including juvenile) N=21	Prev. Comm. (including juvenile) N=134	Total N=155
Non-Recidivists	12 (57.1)	39 (29.1)	51 (32.9)
Recidivists	9 (42.9)	95 (70.9)	104 (67.1)

$X^2 = 6.47$, df = 1, $p < .02$

Table 3

Number of Prior Arrests

	5 or Fewer N=34	6 or More N=121	Total N=155
Non-Recidivists	17 (50.0)	34 (28.1)	51 (32.9)
Recidivists	17 (50.0)	87 (71.9)	104 (67.1)

$X^2 = 5.77$, df = 1, $p < .02$

*Tables are numbered in the order of their statistical significance in terms of discriminating between recidivists and non-recidivists.

Table 4

Age at Present Commitment

	30 or Younger N=80	31 or Older N=75	Total N=155
Non-Recidivists	20 (25.0)	31 (41.3)	51 (32.9)
Recidivists	60 (75.0)	44 (58.7)	104 (67.1)

$X^2 = 4.68$, df = 1, $p < .05$

Table 5

Age at First Arrest

	14 or Younger N=54	15 or Older N=101	Total N=155
Non-Recidivists	12 (22.2)	39 (38.6)	51 (32.9)
Recidivists	42 (77.8)	62 (61.4)	104 (67.1)

$X^2 = 4.28$, df = 1, $p < .05$

Table 6

Length of Present Commitment

	Less Than 1 Yr., 11 Mos. N=78	1 Yr., 11 Mos. or More N=77	Total N=155
Non-Recidivists	21 (26.9)	30 (38.0)	51 (32.9)
Recidivists	57 (73.1)	47 (62.0)	104 (67.1)

$X^2 = 2.54$, df = 1, $.10 < p < .20$

Table 7

Military Record

	No. Mil. Service N=77	Some Mil. Service N=78	Total N=155
Non-Recidivists	21 (27.3)	30 (38.5)	51 (32.9)
Recidivists	56 (72.7)	48 (61.5)	104 (67.1)

$X^2 = 2.20$, df = 1, $.10 < p < .20$

Table 8

Institutional Conduct

	No Good Time Withheld N=117	Some Good Time Withheld N=38	Total N=155
Non-Recidivists	42 (35.9)	9 (23.7)	51 (32.9)
Recidivists	75 (64.1)	29 (76.3)	104 (67.1)

$X^2 = 1.94$, df = 1, $.10 < p < .20$

Table 9

Type of Offense

	Parole Violators N=41	All Other Offenses N=114	Total N=155
Non-Recidivists	10 (26.2)	41 (36.0)	51 (32.9)
Recidivists	31 (73.8)	73 (64.0)	104 (67.1)

$X^2 = 1.83$, df = 1, $.10 < p < .20$

best risk: sex offenders (against minors)	41.2%	return
worst risk: those with a combination of offenses	88.9%	return

Table 10

Type of Home to which Paroled

	With Family or Relatives N=90	Alone or with Friends N=65	Total N=155
Non-Recidivists	26 (28.9)	25 (38.5)	51 (32.9)
Recidivists	64 (71.1)	40 (61.5)	104 (67.1)

$X^2 = 1.57$, df = 1, $.20 < p < .30$

Table 11

Behavioral Disorders

	None N=73	Alcoholism, Drug Addiction, etc. N=82	Total N=155
Non-Recidivists	27 (37.0)	24 (29.3)	51 (32.9)
Recidivists	47 (63.0)	58 (70.7)	104 (67.1)

$X^2 = 1.04$, df = 1, $.30 < p < .50$

Table 12

Type of Release

	Paroled N=105	Discharged N=50	Total N=155
Non-Recidivists	33 (31.4)	18 (36.0)	51 (32.9)
Recidivists	72 (68.6)	32 (64.0)	104 (67.1)

$X^2 = .321$, df = 1, $.50 < p < .70$

Table 13

Home Contacts

	Regular or Frequently N=100	None or Occasional N=55	Total N=155
Non-Recidivists	34 (34.0)	17 (30.9)	51 (32.9)
Recidivists	66 (66.0)	38 (69.1)	104 (67.1)

$X^2 = .151$, df = 1, $.50 < p < .70$

Table 14

Community to which Paroled

	10,000 or fewer N=17	More than 10,000 N=138	Total N=155
Non-Recidivists	6 (35.3)	45 (32.6)	51 (32.9)
Recidivists	11 (64.7)	93 (67.4)	104 (67.1)

$X^2 = .049$, df = 1, $.80 < p < .90$

Table 15

Race

	White N=104	Non-White N=51	Total N=155
Non-Recidivists	34 (32.7)	17 (33.3)	51 (32.9)
Recidivists	70 (67.3)	34 (66.7)	104 (67.1)

$X^2 = .007$, df = 1, $.90 < p < .95$