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REHABILITATION POTENTIAL IN PRISON INMATES AS MEASURED BY THE MMPI

JOHN A. EDWARDS*

PROBLEM

Penologists today recognize that antisocial behavior is more firmly established in some inmates than in others. Accordingly, most prisons use grading systems whereby prisoners who do well and adjust to rehabilitation efforts are given special privileges and good jobs, while those who persist in aberrant behavior are closely observed and restricted. The prison psychologist is often called upon to aid in making decisions about the rehabilitation potential of inmates. This task is formidable in view of the many decisions to be made in a limited amount of time by inadequate and often undertrained staffs. Thus the need for quick, economical, and accurate methods of prediction is paramount.

The Minnesota Multiphasic Personality Inventory (MMPI)¹ and the actuarial method have been used extensively to isolate and describe in a standardized manner the subtle nuances of the personalities of both prison inmates and juvenile delinquents. It has been consistently shown that the MMPI is able to separate groups of inmates and delinquents from groups of "normals," usually high school students, college students, or the original adult norm group.² The mean profiles produced by these deviant groups are found to be quite similar; elevations of F, Pd, Pa, Pt, Sc, and Ma are found to be the most distinguishing features of these profiles, while the "neurotic triad," Mf, and Si are usually found to be the lowest scales in

the profiles.³ Various supplementary MMPI scales⁴ have been employed in the study of inmates,⁵ the most useful being Pr, Re, Do, Dy, Es, Ap, Ec, and De. The following Harris and Lingoes subscales⁶ have also been found useful: Pd 4a, Pd 4b, Ma 1, Ma 2, Pa 1, Pa 2.

The MMPI appears to be less effective in differentiating between more homogeneous groups, such as subgroups of the total inmate population.

³ Hathaway & Monachesi, *The Prediction of Juvenile Delinquents Using the MMPI*, 108 AM. J. PSYCHIAT. 469 (1951); HATHAWAY & MONACHESI, ANALYZING AND PREDICTING JUVENILE DELINQUENCY WITH THE MMPI (1953); Hathaway & Monachesi, *The Personality of Predelinquent Boys*, 48 J. CRIM. L., C. & P.S. 149 (1957); Hathaway & Monachesi, A Longitudinal Study of the Development of Social Adjustment (unpublished, 1957); Monachesi, *Some Personality Characteristics of Delinquents and Non-Delinquents*, 38 J. CRIM. L. & C. 487 (1948); Monachesi, *American Studies in the Prediction of Recidivism*, 41 J. CRIM. L. & C. 268 (1950); Wirt & Briggs, *Personality and Environmental Factors in the Development of Delinquency*, 73 PSYCHOL. MONOG. No. 15 (Whole No. 485, 1959).

⁴ Names and abbreviations of supplementary scales discussed in this study are as follows: Anxiety (A), Repression (R), Prejudice (Pr.), Status (St.), Responsibility (Re), Dominance (Do), Role Playing (Rp), Dependency (Dy), Ego Strength (Es), "Escapism" Index (Ec), Prison Adjustment (AP), Delinquency (De), Emotional Immaturity (Em), Recidivism (Rc).

⁵ Pantou, *MMPI Code Configurations as Related to Measures of Intelligence Among a State Prison Population*, 15 J. CLIN. PSYCHOL. 196 (1959).

⁶ Pantou, *The Response of Prison Inmates to MMPI Subscales*, 6 J. Soc. THERAPY 1 (1959).

Subscale names and abbreviations are as follows: Subjective Depression (D 1), Psychomotor Retardation (D 2), Complaints of Physical Malfunctioning (D 3), Mental Dullness (D 4), Brooding (D 5), Denial of Social Anxiety (Hy 1), Need for Affection and Reinforcement (Hy 2), Lassitude-Malaise (Hy 3), Somatic Complaints (Hy 4), Inhibition of Aggression (Hy 5), Familial Discord (Pd 1), Authority Conflict (Pd 2), Social Imperturbability (Pd 3), Social Alienation (Pd 4A), Self Alienation (Pd 4B), Ideas of External Influence (Pa 1), Poignancy (Pa 2), Affirmation of Moral Virtue (Pa 3), Social Alienation (Sc 1A), Emotional Alienation (Sc 1B), Lack of Cognitive Ego Mastery (Sc 2A), Lack of Conative Ego Mastery (Sc 2B), Lack of Ego Mastery—Defect of Inhibition and Control (Sc 2C), Sensorimotor Dissociation (Sc 3), Amorality (Ma 1), Psychomotor Acceleration (Ma 2), Imperturbability (Ma 3), Ego Inflation (Ma 4).

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¹ DAHLSTROM & WELSH, AN MMPI HANDBOOK (University of Minnesota Press 1960).

² See Clark, *The Relationship Between MMPI Scores and Psychiatric Classification of Army General Prisoners*, 8 J. CLIN. PSYCHOL. 86 (1952); Fry, *A Study of Personality Traits of College Students and of State Prison Inmates as Measured by the MMPI*, 28 J. PSYCHOL. 439 (1949); R. E. Smith, *Personality Configurations of Adult Male Penal Populations as Revealed by the MMPI* (Ann Arbor: University Microfilms, 1955).

Conflicting data have been reported,⁷ but the results have generally shown that recidivists and prisoners who continually break prison rules score higher than other inmates on all of the clinical scales of the MMPI, with Pd and Ma being the highest. Scores on Harris and Lingoes subscales Ma 3, Pd 1, and Pd 2 were also high for recidivists.

Other variables found to be important factors in the type of profiles produced by delinquents and inmates are age, race, IQ, sex, education, and socioeconomic background.⁸ Reports of their effect, however, have not been consistent.

The present study has further investigated the effectiveness of the MMPI in differentiating among subgroups of the total prison population. This study has pursued the feasibility of employing the MMPI in selecting those youthful first offenders in the prison system who can be successfully rehabilitated in a minimum security youth center.

METHOD

The inmates whose MMPI records were analyzed in this study came from two sources: Central Prison in Raleigh, North Carolina, and Umstead Youth Center at Butner, North Carolina. The latter is a minimum security unit for first offenders in which a maximum rehabilitation effort is made.

The MMPI was administered to the Central Prison subjects after they had been classified and had had a chance to adjust to prison life. The MMPI was administered to the Youth Center subjects as they were being initially classified and before they were selected to go to the Youth

⁷ See and compare the following: *Application of the MMPI in Differentiating AWOL Recidivists From Non-Recidivists*, 26 J. PSYCHOL. 229 (1948); Clark, *The Adjustment of Army AWOLs*, 44 J. ABNORM. SOC. PSYCHOL. 394 (1949); Dunham, *Factors Related to Recidivism in Adults*, 39 J. SOC. PSYCHOL. 77 (1954); Ekman, *A Study of Disciplinary Offenders in a Military Stockade* (Dept. of Army, Final report, project number 6-60-01-022, 1960); Levy & Freeman, *Use of the MMPI in Measuring Adjustment of Prisoners*, 1 J. SOC. THERAPY 33 (1954); Levy et al., *The Outstanding Personality Factors Among the Population of a State Penitentiary: A Preliminary Report*, 13 J. CLIN. EXPER. PSYCHOPATH. 117 (1952); Morrice, *The MMPI in Recidivist Prisoners*, 108 J. MENT. SCI. 632 (1957).

⁸ Caldwell, *Case Analysis Method for the Personality Study of Offenders*, 45 J. CRIM. L., C. & P.S. 291 (1954); Fry, *supra* note 2; Pantoni, *MMPI Code Configurations as Related to Measures of Intelligence Among a State Prison Population* (unpublished manuscript 1958); Pantoni, *Inmate Personality Differences Related to Recidivism, Age, and Race as Measured by the MMPI*, 4 J. CORRECT. PSYCHOL. 28 (1959); Stanton, *Group Personality Profiles Related to Aspects of Antisocial Behavior*, 47 J. CRIM. L., C. & P. S. 340 (1956).

Center. These inmates were carefully selected for the Youth Center on the basis of the following criteria: The inmate had to be (1) a male under 25 years of age when sentenced and who had not previously served a term in any jail, prison, or training school, (2) in honor grade and serving a sentence of 12 months or more, (3) physically and emotionally qualified, (4) responsive to training, and (5) desirous of an assignment to a Youth Center.

For purposes of this study, the best and simplest measure of success of rehabilitation was found to be disposition of the inmates. Thus, the following dispositional groups, which range from the most to the least successful outcomes, were utilized in this study:

Butner Success (N = 18)—The inmates in this group have apparently adjusted well to the Youth Center and have served their time there successfully, without return to a field unit or Central Prison. This large group was further divided into two smaller subgroups:

Butner Parole (N = 9)—Members of this group have been paroled before serving their full term and apparently show excellent behavior.

Butner Term (N = 9)—Members of this group served their full term at the Youth Center.

Butner Failure (N = 18)—The inmates in this group have met all of the criteria for entering Butner, but have failed to adjust satisfactorily and have been returned to a field unit or to Central Prison. This large group was also divided into two subgroups:

Butner Transfer (N = 9)—Members of this group have been transferred to field units because they have either broken rules or requested transfer (they didn't like it, or they wanted to be near home, etc.).

Butner Escape (N = 9)—Members of this group have escaped from Butner and consequently have been returned to a field unit or to Central Prison.

Prison Failure (N = 18, including 9 inmates of the smaller group matched with the 4 smaller Butner subgroups)—This last dispositional grouping was obtained from the population at Central Prison and was included in order to provide measures of success ranging from most successful (Butner Parole) to least successful (this group). The inmates in this group have

TABLE I
 MEAN RAW SCORES, STANDARD DEVIATIONS, AND CODED MEAN MMPI PROFILES FOR THREE LARGE
 DISPOSITIONAL GROUPINGS AND CODED MEAN PROFILES FOR FIVE SUBGROUPS OF
 PRISON INMATES

Groups	Mean Raw Scores and Coded MMPI Profiles for Three Prison Groups (N = 18 in each group)													
	L	F	K	1	2	3	4	5	6	7	8	9	0	Sc 2a
Prison Failure														
Mean.....	3.95	8.00	14.11	15.74	21.84	23.58	29.42	21.89	12.11	30.32	31.84	22.16	27.05	2.26
SD.....	1.32	3.38	3.79	4.31	5.35	3.34	4.10	4.69	4.09	5.23	7.16	5.07	7.77	1.79
Code.....						4	8	7	3	9	2	1	6	50
														F-K/L
Butner Failure														
Mean.....	4.68	5.63	13.68	15.74	23.26	21.00	27.47	23.47	10.95	27.00	26.00	21.11	28.32	0.95
SD.....	2.06	3.15	4.52	6.83	6.38	5.31	4.14	3.78	3.39	3.14	5.75	4.04	8.41	0.85
Code.....						4	2	1	9	3	6	7	8	50
														FLK/
Butner Success														
Mean.....	4.05	5.05	14.47	13.11	21.63	20.68	27.37	21.21	10.21	27.37	26.26	21.05	27.05	1.84
SD.....	1.55	3.52	4.59	4.54	4.07	5.67	4.08	2.57	3.92	5.58	5.57	3.57	8.03	1.64
Code.....						4	2	9	7	8	3	6	1	50
														FKL/
	Coded MMPI Profiles for Five Prison Groups (N = 9 in each group)													
Prison Failure.....						4	8	7	6	9	3	2	1	50
														F-K/L
Butner Escape.....						2	4	1	3	5	7	9	6	80
														LFK/
Butner Transfer.....						4	2	1	6	9	8	7	3	05
														FKL/
Butner Term.....						4	9	2	8	3	6	7	1	50
														F-K/L
Butner Parole.....						4	6	2	9	8	7	3	1	50
														K/LF

made poor adjustments to prison life and have never been selected to go to a Youth Center. They have committed multiple infractions; almost all have attempted escape, and many have refused to work, been involved in fighting, attempted to steal state property, or incited a riot. None are A grade or Honor grade prisoners, and all seem constantly to cause trouble.

In light of the studies which report that MMPI profiles are affected by age, sex, race, IQ, and education, the above dispositional groups were matched according to these variables to rule out their effect on the profiles to be studied. The subjects, then, were male Caucasians who were about 20 years of age, had completed approximately nine years in school, and were within the average intellectual range (mean IQ approximately 96). The groupings were necessarily small because of the need to match the inmates according to the above variables, and because of the low rate of poor outcomes at the Umstead Youth Center.

A simple analysis of variance and *t* tests were used to test for significant differences between the three large groups and later between the five smaller subgroups. A configural analysis after Sullivan and Welsh⁹ was also made in an effort to derive signs which would differentiate the groups. The following data were included in the analyses: (a) the 10 standard MMPI scales and the three validity scales; (b) 14 supplementary MMPI scales: A, R, Pr, St, Re, Do, Rp, Dy, Es, Ec, Ap, De, Em, Rc; (c) the Harris and Lingo's subscales; (d) the mean number of scales with T-scores greater than 65, 70, or 75.

RESULTS AND DISCUSSION

The results indicate that the MMPI was able to differentiate between the groups representing very poor rehabilitation potential (Prison Failure)

⁹ WELSH & DAHLSTROM, BASIC READINGS ON THE MMPI IN PSYCHOLOGY AND MEDICINE (1956).

TABLE II
SIGNIFICANT RESULTS OF ANALYSIS OF VARIANCE OF DATA FROM EIGHT PRISON GROUPS

Scale	Three Groups (N = 18 in each)			Five Groups (N = 9 in each)		
	Mean Square		F Values	Mean Square		F Values
	Between (df = 2)	Within (df = 54)		Between (df = 4)	Within (df = 40)	
Sc.....	92.93	607.11	4.13**	469.35	1349.23	3.48*
Sc 2a.....	17.16	119.16	3.89*	24.97	82.01	3.04

* p .05

** p .01

and all of the Butner groups, which represent better potential for success in rehabilitation.

Table I shows the mean raw scores of the standard MMPI scales, the coded profiles for the three largest groups, and the coded profiles for the five smallest groups. Scale 8 (Sc) and subscale Sc 2a were the only scales found to be consistently significant in data from all of the dispositional groupings. A summary of the analysis of variance and *t* test for these two variables is shown in Tables II and III. High scores on both of these scales are indicative of poor potential. The only sign (after Sullivan and Welsh) which was found to separate the Prison Failure group from the Butner groups was the one in which scale 8 (Sc) is higher than Scale 2 (D) in profiles from inmates with poor outcomes.

The mean coded profiles for all of the groups shown in Table I are typical of those denoting character and behavior disorders, with the highest scale in all but one case being scale 4 (Pd). Further inspection of these coded profiles, however, shows that profiles with the highest scale pair being 42 are indicative of good rehabilitation potential, and profiles with the highest scale pair being 48 are indicative of poor potential.

These are pertinent findings in the light of findings reported in the *MMPI Handbook*.¹⁰ It states that prognosis for improvement under a rehabilitation program is poor for inmates with profiles having either 42 or 48 as the higher scale pair. The findings of the present study tend to contradict this, in that inmates with 42 profiles tend to have better rehabilitation potential than those with 48 profiles.

There was no indication that Scales 4 (Pd) and 9 (Ma) functioned as "excitatory" nor that

TABLE III

t TEST VALUES FOR VARIABLES FOUND SIGNIFICANT IN ANALYSES OF VARIANCE OF DATA FROM EIGHT PRISON GROUPS

Groups	Sc	Sc 2a
(N = 18 in each group)		
Prison Failure—Butner Failure.....	2.77**	2.88**
Prison Failure—Butner Success.....	2.65*	2.09*
Butner Failure—Butner Success.....	ns	ns
(N = 9 in each group)		
Prison Failure—Butner Escape.....	3.12**	2.63*
Prison Failure—Butner Transfer.....	2.20*	2.69*
Prison Failure—Butner Term.....	1.79"	ns
Prison Failure—Butner Parole.....	2.59*	1.79"
Butner Escape—Butner Transfer.....	ns	ns
Butner Escape—Butner Term.....	ns	ns
Butner Escape—Butner Parole.....	ns	ns
Butner Transfer—Butner Term.....	ns	ns
Butner Transfer—Butner Parole.....	ns	ns
Butner Term—Butner Parole.....	ns	ns

* p .05

** p .01

" p .10

Scales 0 (Si) and 5 (Mf) functioned as "inhibitory," as suggested by Hathaway and Monchesi.¹¹ Inspection of the coded profiles shows that Si and Mf are the lowest two scales in all but one of the profiles. (The Butner Escape profile has Si as the lowest scale while Mf is in an intermediate position.) Scale 8 (Sc), however, does seem to act as "excitatory," while Scale 2 (D) is "inhibitory," giving partial support to the findings of the two authors cited above.

¹¹ Hathaway & Monchesi, *The Personality of Pre-delinquent Boys*, *supra* note 3.

¹⁰ DAHLSTROM & WELSH, *op. cit. supra* note 1.

It is apparent then that the combination of psychopathic and schizoid features indicated by an elevation of Scales 4 (Pd) and 8 (Sc) is indicative of poor rehabilitation potential. The secondary elevation of Sc in the profiles of these poor risks seems to emphasize their tendency to be unable to control impulses to act out. The *MMPI Handbook* describes individuals with 48 profiles as odd, peculiar, queer, unpredictable, impulsive, and non-conforming, but points out that they seldom show frankly bizarre behavior.

The role which Scale 8 (Sc) plays when combined with Scale 4 (Pd) is further clarified by the analysis of the Harris and Lingo's subscales, which shows Sc 2A to be elevated significantly for the Prison Failure group. The 10 items on this scale are indicative of "a lack of cognitive ego mastery" or "the admission of autonomous thought processes and strange, puzzling ideas." Thus it appears that deviant or confused thinking together with tendencies toward being impulsive, individualistic, adventurous, and unable to learn from past experiences, while not resulting in overtly strange behavior, results in poor adjustment to the demands of prison in general.

When Scale 2 (D) is higher than Scale 8 (Sc) in profiles with high Pd spikes, unpredictable, impulsive, and non-conforming tendencies are much better controlled. Elevations of this Scale (D) suggest an internalization of conflict, which usually results in such symptoms as depression, guilt and inhibition of hostile impulses. Past research in this area has suggested that these depressive features appear to be situationally produced and short-lived and do not reflect any internal conflicts which the individual may be suffering. Recurrences of acting out and subsequent exaggerated guilt in these individuals are said to be common. In this study, however, it should be remembered that the administration of the MMPI to the inmates comprising the Butner groups took place prior to their admission to the intensified rehabilitation program of the Youth Camp, and that the outcome was not known until several years later; consequently, the

effect of an initial elevation on Scale 2 (D) may be more permanent than previously believed.

There are suggestions in the data (somewhat less clearcut than those reported above) that conflict over familial control (Pd 1), the number of scales greater than T-score of 65, the feeling of a lack of rapport with other people (Sc 1a), and the need to act out in order to escape anxiety (Ma 2) are indicative of poor rehabilitation potential.

It should be noted that none of the variables studied was found to differentiate the rather homogeneous Butner groups from one another. This finding is another indication that the MMPI is much less efficient in separating "minimum contrast" groups.

Psychologically then it appears that prisoners who continually cause problems are more schizoid, unpredictable, impulsive, and nonconforming than more model prisoners. The writer has found further evidence in support of this psychological description in a study revealing no significant differences between the mean profiles from the Prison Failure group and the mean profiles from three groups of hospital patients diagnosed as schizophrenic.¹²

SUMMARY

The MMPI profiles of prison inmates grouped according to final disposition, which ranged from most to least successful, were analyzed in order to determine what MMPI variables are useful in selecting inmates for a maximum rehabilitation effort. The test was not able to differentiate among the more homogeneous groups made up of inmates from a minimum security rehabilitation camp for youthful first offenders, but it was able to separate all of these groups from a group of inmates with records of extremely poor adjustment to the prison environment. These poorly adjusted prisoners appeared more schizoid than the better adjusted inmates from the youth camp as evidenced by a significant elevation of Sc and Sc 2a.

¹² Edwards, Prison Inmates and Hospitalized Psychotics: MMPI Profile Similarities (unpublished, 1961).