

The Japanese MMPI and its Delinquency Scale

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THE JAPANESE MMPI AND ITS DELINQUENCY SCALE

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1. The author developed the Japanese standardized edition of the MMPI. To this venture, two main works of translation of 550 inventory items into Japanese and Japanese standardization are essential.

The Japanese version of inventory items is revised sufficiently. Data on standardization are shown in part I.

2. Examples of personality profiles by the American and Japanese norms are shown in part II.

3. The delinquency scale appropriate to Japanese adolescents has been developed by the author. Validity of this scale is tested and data on standardization are shown.

Rankings of scores based on the distribution of scores are given to screen delinquents or to discriminate the degree of delinquency.

The MMPI was introduced to Japanese psychological world after the II Great War. Japanese psychologists researched into this new personality test.*

From my experience in the MMPI, personality of the normal Japanese is profiled, high elevated by the American standard of assesement. Therefore, Japanese standardization is essential to assesement of personality of the Japanese just as standardizations appropriate to each national population were done by psychologists in several countries.

Nevertheless for the purpose of comparing norms among different national populations, or for cross-cultural research, we must use the same standard of assesement, for example, the American standard.

I. THE JAPANESE STANDARDISED EDITION OF THE MMPI

A. The Japanese version of the MMPI

For the purpose of using the MMPI in Japan, I, with my colleagues, developed the Japanese edition, which needed two main works of translation of 550 inventory items into Japanese and Japanese standardization for assesement.

We translated 550 items into Japanese investigating carefully and revised the version several times until we have nothing further to revise.

* I made contract with the American copyright owner of the MMPI and obtained the right to version and of publication of the Japanese edition. The Japanese edition was published in 1963. Users are increasing every year.

B. The Japanese standardization

The sample we selected consisted of 1006 inhabitants of seven districts in Japan.

Table 1. represents items of the sample.

Table 1.

Age	Male		Female		Total
	Single	Married	Single	Married	
15~19	143		126	2	271
20~24	171	14	143	26	354
25~29	82	27	35	31	175
30~34	8	39	2	23	72
35~39	3	28		19	50
40~44		23		18	41
45~49		10		15	25
50~54		8		5	13
55~		4		1	5
Total	407	153	306	140	1006
	560		446		
	1006				

Table 2.

Scale	Male N=560		Female N=446		Male and Female Averaged N=1006	
	Mean	S.D.	Mean	S.D.	Mean	S.D.
?	—	—	—	—	13.64	16.76
L	—	—	—	—	4.98	2.73
F	—	—	—	—	8.90	4.40
K	—	—	—	—	13.42	4.96
Hs+.5K	15.15	4.72	17.10	5.10	—	—
D	27.41	4.89	29.79	5.86	—	—
Hy	21.53	5.72	24.17	5.94	—	—
Pd+.4K	—	—	—	—	24.10	4.80
Mf	26.62	4.93	34.31	4.58	—	—
Pa	—	—	—	—	11.79	4.06
Pt+K	03.60	5.63	31.84	5.90	—	—
Sc+1K	—	—	—	—	32.57	6.64
Ma+ .2K	—	—	—	—	16.51	5.13
Si	32.18	8.31	35.60	8.14	—	—

Table 2. represents means and SDs of the regular clinical scales obtained by the Japanese standardization.

Table 3. and Table 4. represent converting raw scores to T scores when the K factor has been added to the raw scores of five of the clinical variables, which are obtained by the Japanese standardization (Male and Female).

Table 3. (Male)

Raw scores (K added)	T scores														Raw scores (K added)	
	?	L	F	K	Hs+.5K	D	Hy	Pd+.4K	Mf	Pa	Pt+1K	Sc+1K	Ma+2K	Si		
70	75														95	70
69															94	69
68															105	68
67															104	67
66															102	66
65															101	65
											111	99		89		
64											110	97		88	64	
63											108	96		87	63	
62											106	95		86	62	
61											104	93		84	61	
60						117	117				102	92		83	60	
59						115	116		116		101	90		82	59	
58						113	114		114		99	88		81	58	
57						111	112		112		97	87		80	57	
56						109	110		110		95	85		78	56	
55						107	109		108		94	84		77	55	
54						105	107		106		92	82		76	54	
53						103	105		104		90	81		75	53	
52						101	103		102		88	79		74	52	
51						98	102	106	100		86	78		72	51	
50	70					96	100	104	98		85	76		71	50	
49						94	98	102	96		83	75		70	49	
48					120	92	96	100	93		81	73		69	48	
47					117	90	95	98	91		79	72		68	47	
46					115	88	93	96	89		78	70	115	66	46	
45					113	86	91	93	87		76	69	113	65	45	
44					111	84	89	91	85		74	67	110	64	44	
43					109	82	88	89	83		72	66	108	63	43	
42					107	80	86	87	81		70	64	106	62	42	
41					105	78	84	85	79		69	63	103	60	41	
40	65				103	76	82	83	77		67	61	101	59	40	
39					100	74	81	81	75		65	60	99	58	39	
38					98	72	79	79	73		63	58	96	55	38	
37					96	70	77	77	71		61	57	94	76	73	
36					94	68	75	75	69		60	55	91	54	36	
35					92	66	74	73	67		58	54	89	53	35	
34					90	64	72	71	65	105	56	52	87	52	34	
33					88	62	70	68	63	102	54	51	84	51	33	
32					86	60	68	66	61	100	53	49	82	50	32	
31					84	57	66	64	59	97	51	48	80	48	31	
30	60			84	81	55	75	62	57	95	49	46	77	47	30	
29				82	79	53	63	60	55	92	47	45	75	46	29	
28				80	77	51	61	58	53	90	45	43	73	45	28	
27				78	75	49	60	56	51	87	44	42	70	44	27	
26				76	73	47	58	54	49	85	42	40	68	42	26	
25				73	71	45	56	52	47	82	40	39	66	41	25	

Table 3. continued

24			71	69	43	54	50	45	80	38	37	63	40	24	
23		82	69	67	41	53	48	43	78	37	36	61	39	23	
22		80	67	64	39	51	46	41	75	35	34	53	38	22	
12		77	65	62	37	49	44	39	73	33	33	56	36	21	
05	58	75	63	60	35	47	41	37	70	31	31	54	35	20	
19		78	61	58	33	46	39	35	68	29	30	51	34	19	
18		71	59	56	31	44	37	33	65	28	28	49	33	18	
17		68	57	54	29	42	35	31	63	26	27	47	32	17	
16		66	55	52	27	40	33	29	60	24	25	44	30	16	
15	87	64	53	50	25	39	31	26	58	22	24	42	29	15	
14		83	62	51	47	23	37	29	24	55	21	22	40	28	14
13		79	59	49	45	21	35	27	22	53		21	37	27	13
12		76	57	47	43		33	25	20	50			35	26	12
11		72	55	45	41		32	23		48			32	24	11
10	50	68	52	43	39		30	21		46			30	23	10
9		65	50	41	37		28			43			28	22	9
8		61	48	39	35		26			41			25	21	8
7		57	46	37	33		25			38			23	20	7
6		54	43	35	31		23			36			21		6
5	45	50	41	33	28		21			33					5
4		46	39	31	26					31					4
3		43	37	29	24					28					3
2		39	34	27	22					26					2
1		35	32	25	20					23					1
0	40	32	30	23						21					0
	?	L	F	K	Hs+ .5K	D	Hy	Pd+ .4K	Mf	Pa	Pt+ 1K	Sc+ 1K	Ma+ .2K	Si	

Table 4. (Female)

Raw scores (K added)	T scores														Raw scores (K added)	
	?	L	F	K	Hs+ .5K	D	Hy	Pd+ .4K	Mf	Pa	Pt+ 1K	Sc+ 1K	Ma+ .2K	Si		
70	75														91	70
69												105			90	69
68												104			89	68
67												102			87	67
66												101			86	66
65											106	99			85	65
64											104	98			84	64
63											103	96			83	63
62											101	95			81	62
61											99	93			80	61
60						102	110				98	92			79	60
59						100	108				96	90			78	59
58						98	107				94	88			76	58
57						97	105				92	87			75	57
56						95	103				91	85			74	56
55						93	102				89	84			73	55

Table 4. -continued

Raw scores (Kadded)	T scores														Raw scores (Kadded)
	?	L	F	K	Hs+.5K	D	Hy	Pd+.4K	Mf	Pa	Pt+1K	Sc+1K	Ma+.2K	Si	
54						91	100				87	82		71	54
53						90	98				86	81		70	53
52						88	97				84	79		69	52
51						86	95	106			82	78		68	51
50	70					85	93	104			81	76		67	50
49						83	92	102			79	75		65	49
48					111	81	90	100	20		77	73		64	48
47					109	79	88	98	22		76	72		63	47
46					107	78	87	96	25		74	70	115	62	46
45					105	76	85	93	27		72	69	113	60	45
44					103	74	83	91	29		70	67	110	59	44
43					101	73	82	89	31		69	66	108	58	43
42					99	71	80	87	33		67	64	106	57	42
41					97	69	78	85	35		65	63	103	55	41
40	65				95	68	76	83	38		64	61	101	54	40
39					93	66	75	81	40		62	60	99	53	39
38					81	64	73	79	42		60	58	96	52	38
37					89	62	71	77	44		59	57	94	51	37
36					87	61	70	75	46		57	55	91	49	36
35					85	59	68	73	49	105	55	54	89	48	35
34					83	57	66	71	51	102	54	52	87	47	34
33					81	56	65	68	53	100	52	51	84	46	44
32					79	54	63	66	55	97	50	49	82	44	32
31					77	52	61	64	57	95	49	48	80	43	31
30	60			84	75	50	60	62	59	92	47	46	77	42	30
29				82	74	49	58	60	62	90	45	45	75	41	29
28				80	72	47	56	58	64	87	43	43	73	39	28
27				78	70	45	55	56	66	85	42	42	70	38	27
26				76	68	44	53	54	68	82	40	40	68	37	26
25				73	66	42	51	52	70	80	38	39	66	36	25
24				71	64	40	50	50	73	77	37	37	63	35	24
23			82	69	62	38	48	48	75	75	35	36	61	33	23
22			80	67	60	37	46	46	77	73	33	34	58	32	22
21			77	65	58	35	45	44	79	70	32	33	56	31	21
20	55		75	63	56	33	43	41	81	68	30	31	54	30	20
19			73	61	54	32	41	39	83	65	28	30	51	28	19
18			71	59	52	30	40	37	86	63	27	28	49	27	18
17			68	57	50	28	38	35	88	60	25	27	45	26	17
16			66	55	48	26	36	33	90	58	23	25	44	25	16
15		87	64	53	46	25	34	31	92	55	21	24	42	23	15
14		83	62	51	44	23	33	29	94	53	20	22	40	22	14
13		79	59	49	42	21	31	27	97	50		21	37	21	13
12		76	57	47	40	20	29	25	99	48			35	20	12
11		72	55	45	38		28	23	101	46			32		11
10	50	68	52	43	36		26	21	103	43			30		10

Table 4. -continued

9		65	50	41	34		24		105	41			28		9
8		61	48	39	32		23		107	38			25		8
7		57	46	37	30		21		110	38			23		7
6		54	43	35	28				112	36			21		6
5	45	50	41	33	26				114	33					5
4		46	39	31	25				116	21					4
3		43	37	29	23				118	28					3
2		39	34	27	21				120	26					2
1		35	32	25						23					1
0	40	32	30	23						21					0

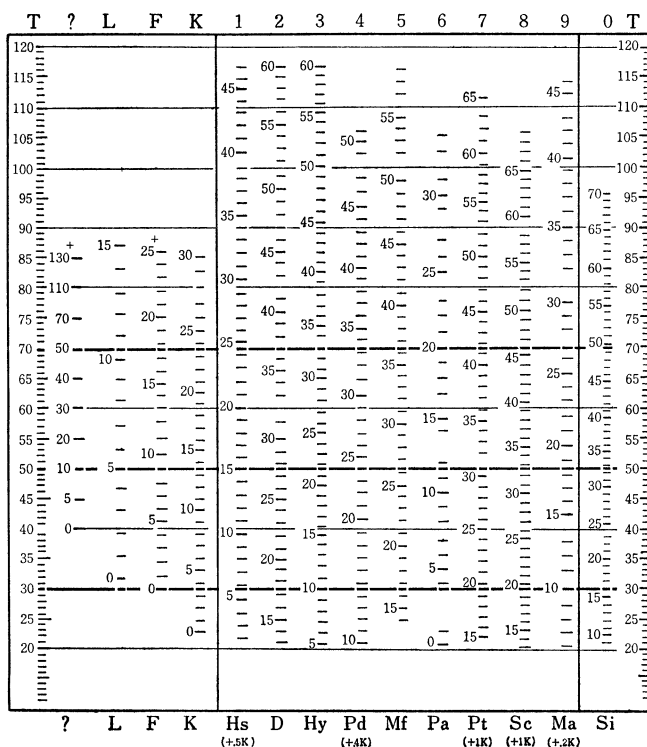


Fig. 1 (Male)

Fig. 1 and 2 are profile charts of male and female represented by the above converting tables.

II. SOME NORMATIVE DATA OF JAPANESE ON THE MMPI

1. *Personality profiles of the normal Japanese measured by the American norms.*

Table 2. shows a normative data of Japanese on the MMPI.

Fig 3. represents a typical averaged profile (A) of male Japanese (249 college

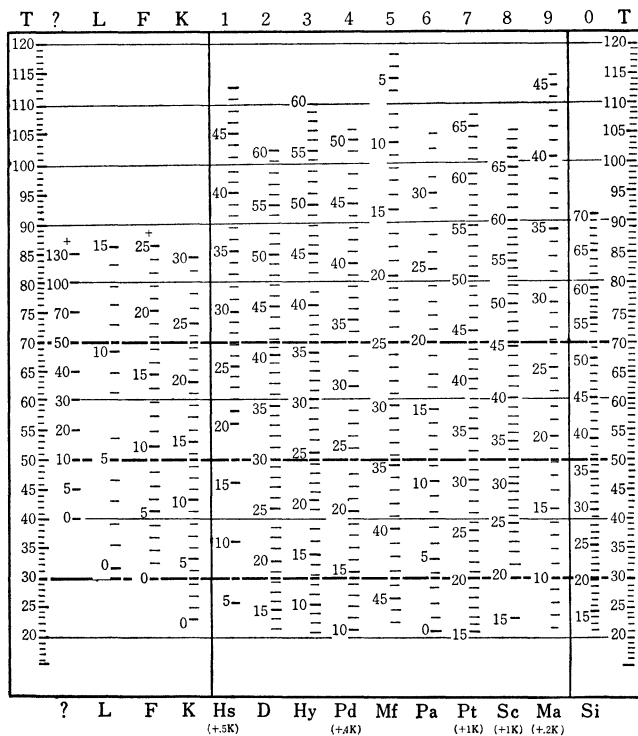
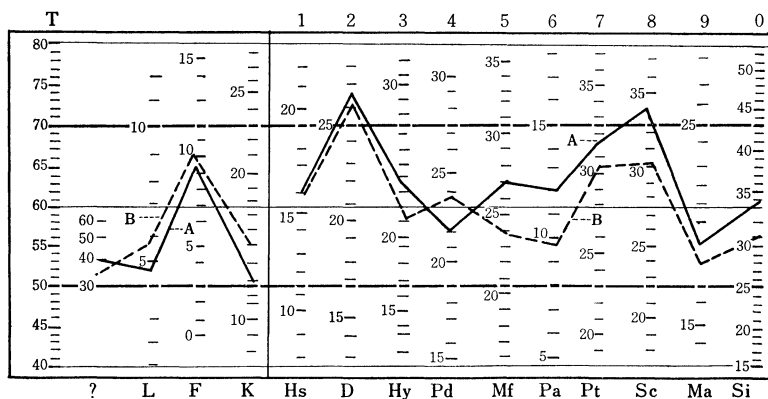


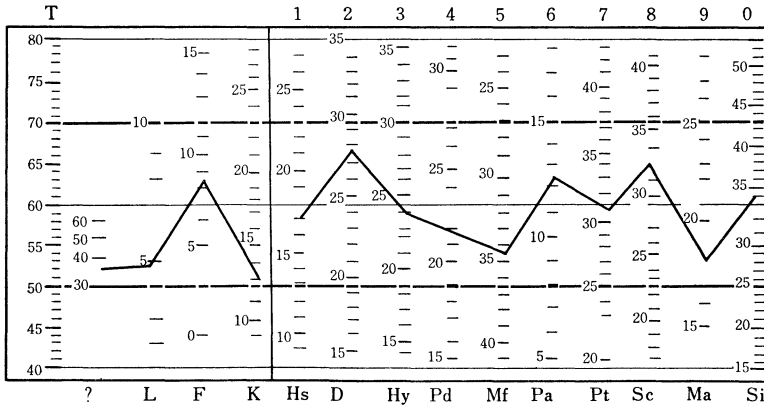
Fig. 2 (Female)



(Male)		L	F	K	Hs	D	Hy	Pd	Mf	Pa	Pt	Sc	Ma	Si
AN=249	\bar{X}	4.5	9.7	12.6	15.9	26.8	23.4	22.0	27.0	12.0	31.4	33.4	18.7	32.8
	S.D.	2.3	5.8	4.5	4.1	6.3	5.8	5.0	5.2	3.4	6.7	8.8	4.5	9.5
BN=560	\bar{X}	5.7	10.2	15.0	15.7	25.9	21.3	23.4	23.9	9.7	30.8	30.3	18.1	30.0
	S.D.	2.1	4.6	4.4	4.2	5.7	5.6	5.3	4.9	3.2	5.8	6.2	4.3	8.4

(K corrected)

Fig. 3



(Female)		L	F	K	Hs	D	Hy	Pd	Mf	Pa	Pt	Sc	Ma	Si
N=536	\bar{X}	4.8	8.5	13.1	17.0	27.4	24.1	21.9	34.5	12.4	30.7	32.6	18.3	34.0
	S.D.	2.0	4.8	4.4	4.7	5.5	5.8	5.2	5.1	3.7	6.5	7.6	4.9	9.1

(K corrected)

Fig. 4

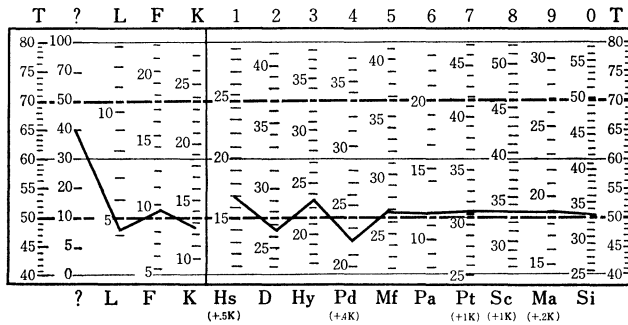


Fig. 5

students), which shows two elevations of neurotic triad and psychotic tetrad. These two elevations are characteristics of averaged profile of the male Japanese. Another averaged profile (B) of 560 members of the Self-defense Corps shows psychotic tetrad less elevated.

Fig 4. represents a typical averaged profile of female Japanese (536 college students), which shows two elevations of neurotic triad and psychotic tetrad with the like of Pa valley. These two elevations are characteristics of averaged profile of the female Japanese.

2. *Personality profiles of normal and abnormal Japanese measured by the Japanese norms.*

Fig 5. shows the averaged profile by the same male sample above stated (college students).

Fig 6. shows the averaged profile by the same female sample above stated. Profiles of abnormal personality.

Fig 7. shows a profile of a 52-year-old bookbinder: schizophrenic reaction, paranoid type. Fig 8. shows a profile of a 27-year-old official: psychoneurosis; anxiety hysteria; phobic reaction.

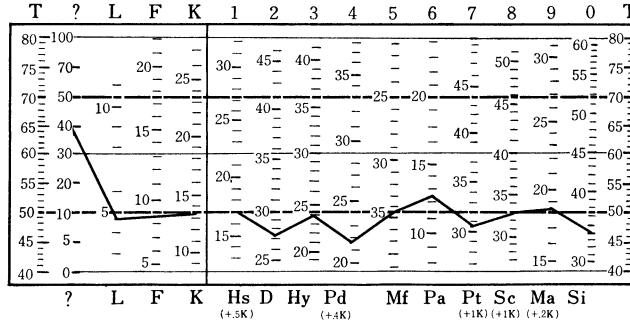


Fig. 6

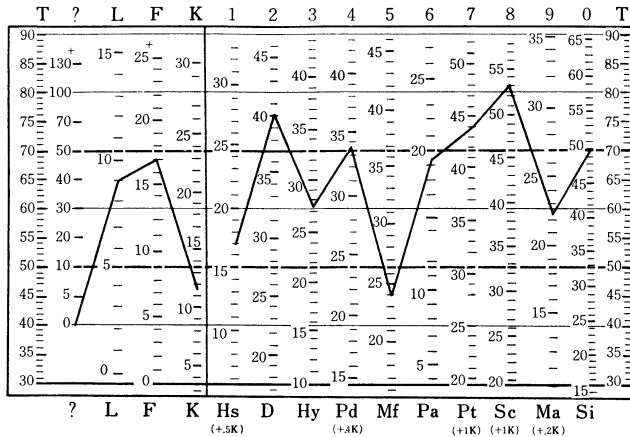


Fig. 7

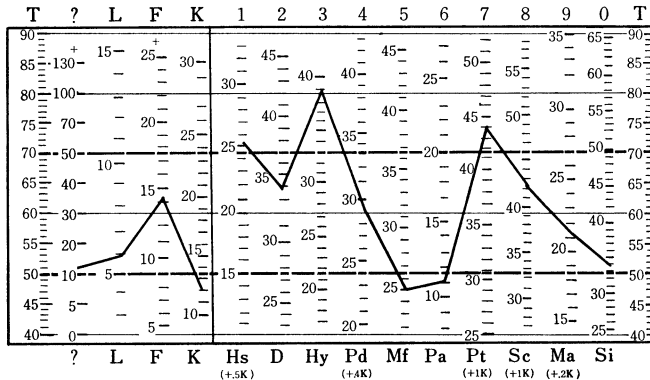


Fig. 8

III. DEVELOPMENT OF JAPANESE DELINQUENCY SCALE OF THE MMPI

We can diagnose delinquent personality by the MMPI and it reminds us of using delinquency scale to discriminate the degree of delinquency, or to screen delinquent youth directly.

I, with my colleagues, developed delinquency scale of the MMPI for Japanese delinquent youth two years ago, and the value of this scale is recognised by specialists.

A. Method

1. Procedure

The work of developing delinquency scale is to find out items that distinguish delinquents from non-delinquents, that is, to find out items that show significant difference between responses to items of delinquents and non-delinquents.

2. Selection of samples

The standard group (delinquents) consisted of reformatory boys. The control group (non-delinquents) consisted of male students of high schools and colleges.

Table 5. shows items of the groups.

Table 5.

Age	Standard group	Control group
16-17	Secondary reformatory N=261	High school N=275
18-20	Special reformatory N=220	High school N=83 College N=128

The secondary reformatory commits delinquents whose degree of delinquency may be regarded as about the same as the delinquency level (rating) 3 defined by Hathaway and Monachesi (1963). The special reformatory commits delinquents whose degree of delinquency may be regarded as about the same as the delinquency level 4.

B. Determination of the items of the delinquency scale

Each of 550 items was tested about its significance of difference as above mentioned and 60 items were determined to be significant. The 60 items are as follows:

A 15 37, B 15 28 31 42 49 52 53, C 6 7 11 12 35 41 45 48 51, D 26 29 30 32 33 36 37 43 51, E 12 17 27 28 34 52 53, F 3 18 36 42, G 3 4 9 29 33 37 44 45 53 55, H 3 26 51 54, I 7 30 38 51, J 11 32 33 53.

C. Proof of discrimination

To prove discrimination of these 60 items, responses by new subjects were

Table 6.

New items (60)				Pd scale(50)				Dq scale (23)			
Raw score	M	N	K	Raw score	M	N	K	Raw score	M	N	K
7	1			13	1			2	3		
8	2			14				3	7		1
9	4			15				4	9		
10	3			16	7			5	19		
11	5			17	1			6	11		
12	3			18	3	1		7	14		1
13	9			19	1			8	6	2	3
14	13			20	9		1	9	5	2	1
15	7			21	4	1		10	8	3	7
16	0			22	12	1		11	2	3	7
17	3			23	3	1		12	1	4	7
18	10			24	7		1	13		3	8
19	5			25	15	4	5	14			5
20	1	1		26	7	1	3	15		9	5
21	3			27	4	1	1	16		4	2
22	3	2	1	28	2	4	3	17		3	4
23	2			29	3	2	3	18		1	
24	2	1		30	2	2	1	19		1	
25	2		2	31	1	3	9	20			
26	1	2	1	32		3	6	21		1	
27		3	3	33		4	4	22		1	
28		2	3	34	1		5	23			
29		5	2	35		2	3				
30			2	36	1	2	2				
31		4	2	37	1	3	2				
32		4	4	38		1					
33		3	4	39		1	1				
34		4	5	40							
35		2	5	41							
36			1	42							
37		1	3	43							
38		1	2	44							
39		1	5	45							
40		1	5	46							
41				47							
42				48							
43			1	49							
Total	85	37	51	Total	85	37	51	Total	85	37	51

tested. Table 6. shows the frequencies of responses by the three new groups to the 60 items, Pd scale of the MMPI and Dq scale by Hathaway and Monachesi (1963). The 60 items are proved to be most discriminative.

M means 85 high school boys.

N means 37 secondary reformatory boys.

K means 51 special reformatory boys.

Each parenthesized number means number of items of each scale.

D. Determination of the common items of our delinquency scale in different districts

The 60 items were determined in the Kanto districts. We can not ignore local difference in responses to inventory items. Therefore, we tried to determine discriminating items in other two main districts (Tohoku and Kansai) of Japan.

The Kanto districts are the northern middle part of the mainland of Japan around Tokyo. The Tohoku districts are the north eastern part of the mainland of Japan. The Kansai districts are the southern middle part of the mainland around Kyoto and Osaka.

The procedure to determine items in each district is the same as above stated. After determination of discriminating items in the two districts, the common items in the three districts were determined. The common items are 46 items of the 60 items that exclude the following 14 items: A 15, B 31 39, C 41 51, D 37 43, E 34 52, G 37 53, H 26 54, I 51.

These 46 items are determined to form our discriminative delinquency scale that is in common usable in different districts of Japan.

E. Standardization of our delinquency scale

The sample (standard group) consisted of male students of high schools and colleges.

Table 7. shows items of the sample.

Table 7.

High School students	Kanto	315
	Tohoku	126
	Kansai	42
College students	Tohoku	49
	Kansai	35
Total		567

Table 8. shows distribution of scores of responses to the 46 items by the standard group and delinquent groups.

St. gr. means the standard group. DI means reformatory (of two kinds) boys in the districts of Kansai and Tohoku. DII means reformatory (of two kinds) boys in the Kanto districts. The distribution of scores by DI is almost the same as that by DII.

Table 9. shows the table of converting raw scores to T scores got by normal transformation based on the above distribution of scores by the standard group.

From the above distribution of scores by the standard group the ranking in Table 10. is given concerning degrees of non-delinquency.

Likewise from the above distribution of scores by the delinquent group I, the ranking in Table 11. is given concerning degree of delinquency.

From above data we rank rate of non-delinquency and delinquency as shown in Table 12.

Concerning degree of delinquency we can rate by the ranking as shown in

Table 8.

Raw score	St. gr.	DI	DII
2	1		
3	1		
4	4		
5	8		
6	18		
7	17		
8	22		
9	56		
10	50		
11	53		
12	68	1	
13	33	1	
14	41	3	5
15	27	4	1
16	37	8	6
17	26	3	6
18	16	7	5
19	23	4	14
20	13	13	18
21	10	15	21
22	5	23	21
23	8	20	27
24	4	19	19
25	2	22	22
26		21	27
27		17	19
28		19	17
29		16	18
30		7	17
31		9	13
32		1	8
33		8	6
34		1	2
35		2	0
36			1
Total	567	244	293
Mean	12.74	24.36	24.62
S.D.	4.50	4.55	4.54

Table 9.

Raw score	T score	Raw score	T score	Raw score	T score
2	19	12	50	22	86
3	21	13	52	23	69
4	25	14	54	24	70
5	29	15	56	25	72
6	32	16	57	26	76
7	35	17	59	27	.
8	38	18	61	28	.
9	42	19	62	29	81
10	45	20	64		
11	47	21	66		

Table 10.

Rank	-2	-1	0	+1	+2
Raw score	under 8	9-10	11-15	16-17	over 18

Rank 2 = $M + I \ 2/1 \text{ S.D.}$
 Rank 1 = $M + \text{IS. D.}$
 Rank 0 = $M + 2/1 \text{ S.D.}$
 Rank-1 = $M - \text{IS. D.}$
 Rank-2 = $M - I \ 2/1 \text{ S.D.}$

Table 11.

Rank	-2	-1	0	+1	+2
Raw score	under 19	20-22	23-25	26-28	over 29

Table 12.

Raw score	Grade	Rating
under 13	1	good
14-17	2	common
18-19	3	border (require caution)
over 20	4	dangerous

Table 11.

These are good rating measures for screening delinquent adolescents or for discriminating degree of delinquency.

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ZUSAMMENFASSUNG

Der Autor entwickelte mit seinen Kollegen den japanische MMPI. Die Übersetzungsgenauigkeit ins Japanische ist durch wiederholte Revisionen erhalten. Die Data und der Standardisierung werden in I gezeigt. Normale und abnormale Persönlichkeitsprofile werden in II gezeigt.

Der Autor entwickelte auch die japanische Straffähigkeit (Dq) Skala des MMPI. Die Validität der Skala wird geprüft und die Data der Standardisierung werden in III gezeigt.

Die Gradeinteilungen vom Dq-Wert werden gegeben, um Delinquente auszulesen oder Grad von Straffähigkeit zu unterscheiden. Beide Teste haben genüge Diskriminationsschärfe und ihre Werte sind bei Spezialisten anerkannt.

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