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The Chinese Minnesota Multiphasic Personality Inventory (MMPI): Research and Applications

edited by

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Institute of Social Studies
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Shatin, New Territories
Hong Kong

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THE CHINESE MINNESOTA MULTIPHASIC PERSONALITY INVENTORY (MMPI): RESEARCH AND APPLICATIONS

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Department of Psychology
The Chinese University of Hong Kong

Selected papers from the Symposium on the Use of The Chinese MMPI held on March 16, 1985 at The Chinese University of Hong Kong, jointly sponsored by Department of Psychology and Centre for Hong Kong Studies of The Chinese University of Hong Kong, and Department of Psychology and Department of Continuing Education and Extension of University of Minnesota.

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An Overview of Chinese MMPI Research in Hong Kong

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The MMPI has been used clinically by psychologists and psychiatrists in Hong Kong since the 1970s. Since most of the patients in Hong Kong were only Chinese-speaking, the test items were usually translated instantaneously by the clinician himself/herself. The lack of standardization posed obvious problems in the cross-cultural application of assessment instruments. In 1976, Cheung and Ting attempted to produce a careful Chinese translation, taking into account earlier versions found in Hong Kong and Taiwan. An account of the translation process has been reported by Cheung (1985). The first translation version was test run on psychiatric patients, students, nurses, and probationers in 1977, resulting in the revision on some items and the correction on some errors.

The 1979 Revision of The Chinese MMPI

The second (1979) revision was administered to 229 male students and 163 female students at The Chinese University of Hong Kong. A smaller sample of 98 male and 20 female students of the University of Hong Kong was tested by J. Fowler of the Department of Anatomy. The

profiles of the college students were found to be elevated when compared to their American counterparts, especially on Scales 2, 8, and 7 (Figures 1 and 2). To test whether the responses of college students, who would be considered elites in Hong Kong, were different from those of the average adults, profiles were obtained from 29 male factory workers and 60 female factory workers. The profiles of the factory workers resembled those of the college students (Figure 3).

Reliability and Validity Studies

The psychometric properties of the 1979 edition of the Chinese MMPI were investigated in a series of studies. Cheung (1985) gave a detailed account of these studies. The test-retest reliability at one-week interval was found to be high (.86), and the correlations between the Chinese and the English versions approximated the reliability coefficient (Table 1).

Instructions to produce fake-bad profiles among students produced deviant profiles with extreme F scores, markedly high ranges of scores on all clinical scales which peaked on Scales 8 and 6 at mean T-scores of over 105, and the average F-K index over 40 (Figures 4 and 5). These profiles approximated the patterns found in similar studies in the U.S. (Hunt, 1948; Cofer, Chance, and Judson, 1949; Gough, 1950).

On the other hand, the fake-good profiles did not look too different from the normal profiles except for slightly subdued Scale 7 scores. Like the non-fake profiles, the validity scales stayed within the normal range and the F-K index remained within the -2 to -4 range. It has been noted by Hunt (1948) that fake good and honest profiles based on group averages were hard to distinguish due to the variability in fake-good distortions. Furthermore, even when normals were not explicity instructed to present a good impression of themselves on the MMPI, they may be doing just so implicitly.

Comparisons on the T-scores of the malingering groups in the U.S. and Hong Kong did not show much cultural differences. This observation confirms the conclusions made by other cross-cultural studies which pointed to a basic agreement on the judgment of pathology across cultures, especially on cases of severe psychiatric disorders, but greater variability in the manifestation of desirable or preferred personalities (Butcher and Pancheri, 1976; Murphy, 1976).

Given the elevations on the normal profiles as well as on the fake-good profiles, caution should be exercised in the interpretation that these scale elevations reflected deviance or abnormality. Since the MMPI

clinical scales were constructed on the basis of criterion groups, it should be demonstrated that groups such as psychiatric patients and delinquents scored higher than normals on these scales in Hong Kong.

Studies with patients and delinquents have been difficult given the level of literacy required of these subjects to sit through lengthy sessions of concentration. More than half of the tested subjects we have collected so far had to be invalidated due to careless responding. Preliminary results obtained on 29 male and 17 female psychiatric patients of mixed diagnoses showed a more elevated profile for the females especially on Scales F, 8, 2, and 6, with F and 8 above T-scores of 80. Elevations for the male psychiatric patients were not as distinct from the normal male college students, with Scales 2 approaching a T-score of 80, and Scale 8 only slightly more raised than that of the college males (Figure 6).

The profiles obtained from two groups of male delinquents in Hong Kong (39 adult prisoners and 36 juvenile delinquents under probation) showed elevated T-scores of about one standard deviation above the mean scores obtained by college students on Scales 4, 6, and 9, and also high elevations on Scales 2, 7, and 8. The profiles of the juvenile delinquents aged 12-16 were more

deviant in concordance with results obtained with adolescents in the U.S. (Figure 7).

Given the small size of the samples of psychiatric and delinquent subjects, observations on these MMPI profiles should remain tentative. With the introduction of the computerized version of the Chinese MMPI in the major psychiatric hospital in Hong Kong, error in responding may be reduced and the immediate generation of the test report may encourage clinicians to collect larger samples of the criterion groups. In this respect, profiles for different diagnostic groups need to be established with the external validation based on standardized diagnoses and manifest symptoms identified by the clinicians.

Cross-cultural Comparisons on Item Endorsement

Butcher and Pancheri (1976, p. 116) compared the item endorsement patterns of U.S. college students with those of six other national groups, including Costa Rica, Israel, Japan, Mexico, Pakistan, and Spain. Elevations on Scales 2 and 8 were also noted in these national profiles. The concordance rates in item endorsement between the national group and the American norm were calculated using 20% difference in endorsement percentage as the cutoff for discrepant items. The percentages of discrepant items for Japan and Pakistan were 31% and 33% respectively.

These percentages resembled those obtained for the comparisons between Hong Kong college students and their American counterparts. For the males, 174 (31%) discrepant items were identified whereas 209 (37%) discrepant items were identified for the females (Tables 2 and 3). Correlations on the item endorsement frequencies among the Hong Kong and the American college students were relatively high, with .74 between the males and .67 between the females, compared to a correlation of .89 between the Hong Kong males and females (Table 4).

Differences in item endorsement were further studied in terms of the social desirability of the items. The mean desirability ratings of 73 male and 65 female college students in Hong Kong were compared with those of 83 male and 88 female students reported by Messick and Jackson (in Dahlstrom, Welsh, and Dahlstrom, 1975, Appendix B). The scales with the greatest percentage of items which were rated more or less desirable by one or more points on a nine-point scale were Scales 2 (40%), 8 (32%), and 7 (29%) (Table 5). Items on these three scales were also found to be endorsed at different rates between Hong Kong and American students. These items were related to social behaviour, interpersonal relationship, nonchalent attitudes, acceptance of low activity level and low arousal, less emphasis of fun, acceptance of the need

for hard work and planning, and the virtue of modesty.

Removal of these culturally discrepant items produced more flattened prorated profiles among normals and lowered the range of scale scores (Figures 8 and 9). In the first rescoring (Key A), items deleted were those with endorsement differences of over 50% for both sexes or items with differences of two points or more in desirability ratings. The second rescoring (Key B) removed items with over 20% endorsement differences for both sexes and having over one point difference in desirability ratings. The change in the pattern of the profiles suggests that these items which differed cross-culturally in terms of desirability and endorsement frequency may affect the clinical interpretation of the MMPI. In the future determination of the local norms for Hong Kong, comparisons between normals and criterion groups on these items should be examined.

The 1984 Revision of The Chinese MMPI

On the basis of the item analyses of the 1979 version and feedback from other users of the Chinese MMPI in Hong Kong, a small number of items were refined. The wording of the repeated items on the TR index was made exactly the same. A few items on which large cross-cultural discrepancies were found were modified so that

the meaning would become more comparable. These changes were made in the booklet form as well as in the computerized version of the Chinese MMPI (see Fong, Li, and Shen, this volume). Future studies will be conducted to ascertain the comparability of the 1979 and the 1984 version.

Problems with MMPI Research In Hong Kong

The length of the MMPI poses problems for large-scale public testing in Hong Kong. The level of literacy and the demand for concentration on a paper-and-pencil test curtails the number of suitable voluntary subjects outside the college population. The large number of invalidated profiles among non-college subjects due to random responding resulted in severe wastage.

Data collection with criterion groups is particularly difficult given the little resources available for research in service settings. The heavy workload of personnel at these settings precludes the labour-intensive approach of individualized administration. With the introduction of the computerized version, it is hoped that clinicians and subjects may be encouraged to cooperate in the data collection.

Recognizing the difficulty with non-college subjects, a short-term strategy in validation studies on the Chinese MMPI in Hong Kong should involve subgroups of

college samples who may be experiencing different degrees of psychological difficulties. Concurrent validation may be obtained from counselling reports or other self-report measures. The collection of a large sample of college subjects would also allow the investigation of other psychometric and structural properties of the scales. The increase in interest on the Chinese MMPI among other researchers in Hong Kong will also improve the research activities and provide a larger volume of data on the instrument.

Note

All item numbers cited in the text or tables refer to Form R of the MMPI.

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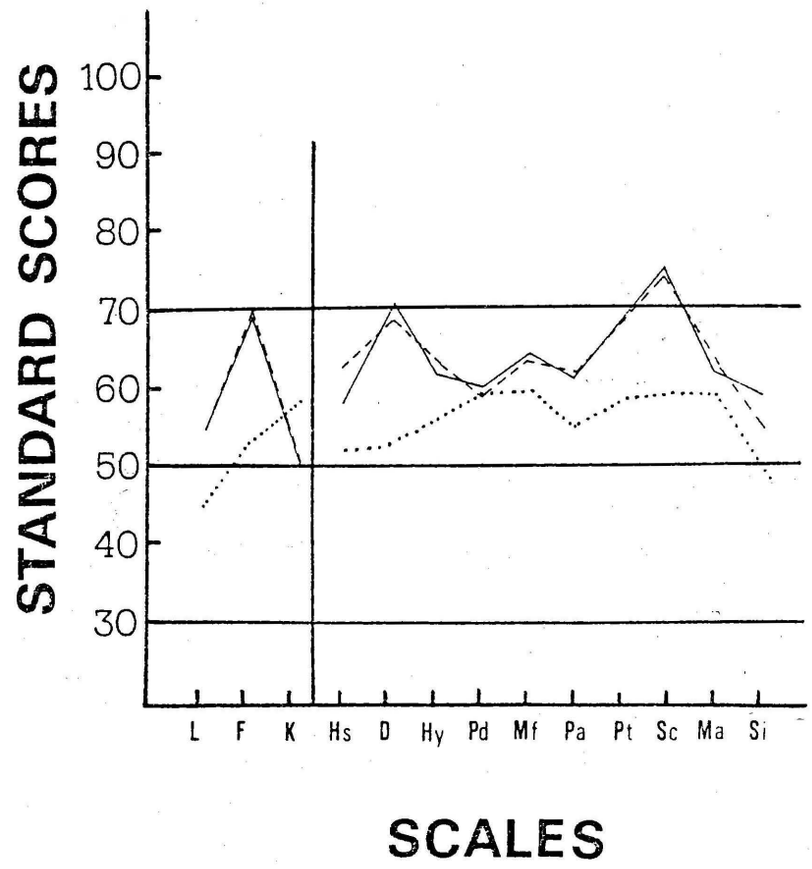
Figure 1. MMPI Profiles of College Males in Hong Kong and the U.S.



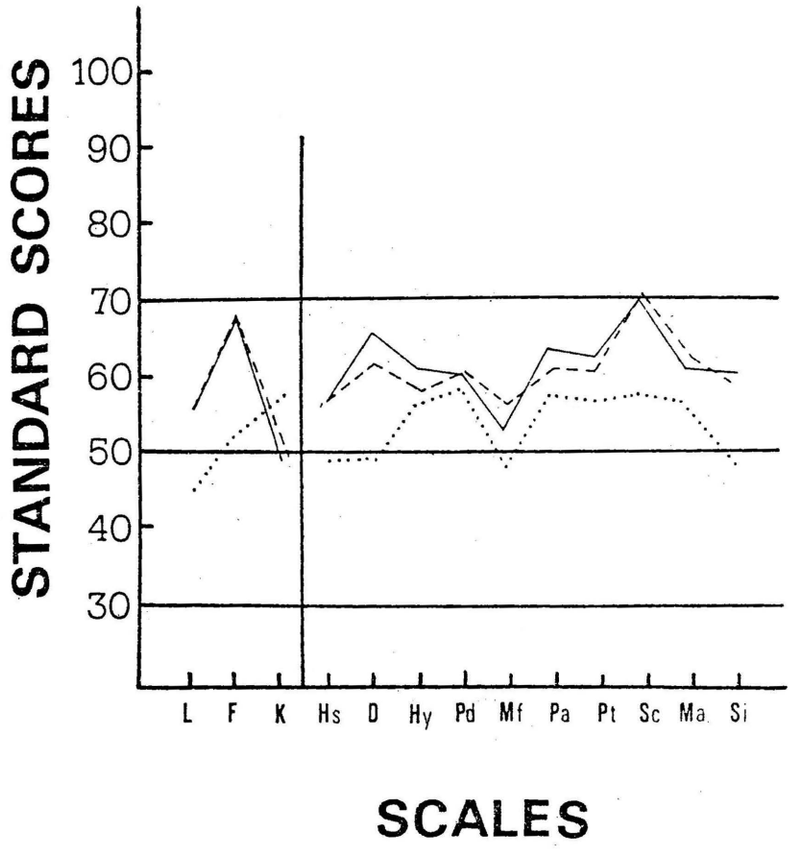
——— Chinese University of Hong Kong Males (N = 229)

- - - - - - - - - - - University of Hong Kong Males (N = 98)

. . . . . University of Minnesota Males (N = 1679)[1]

[1] From Butcher & Pancheri (1976), p. 100

Figure 2. MMPI Profiles of College Females in Hong Kong and the U.S.



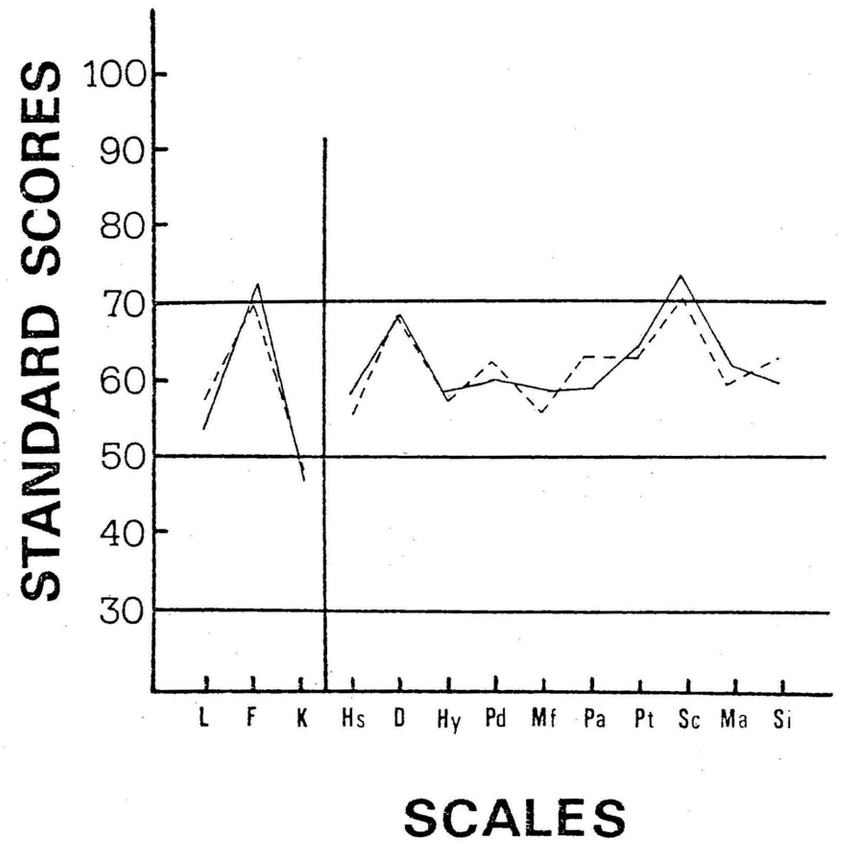
———— Chinese University of Hong Kong Females (N = 163

---------- University of Hong Kong Females (N = 20)

..... University of Minnesota Females (N = 1603)[1]

[1] From Butcher and Pancheri (1976), p. 99

Figure 3. MMPI Profiles of Factory Workers in Hong Kong



———— Male Factory Workers (N = 29)

--------- Female Factory Workers (N = 60)

Figure 4. MMPI Profiles of Hong Kong College Males Under Fake Good and Fake Bad Conditions

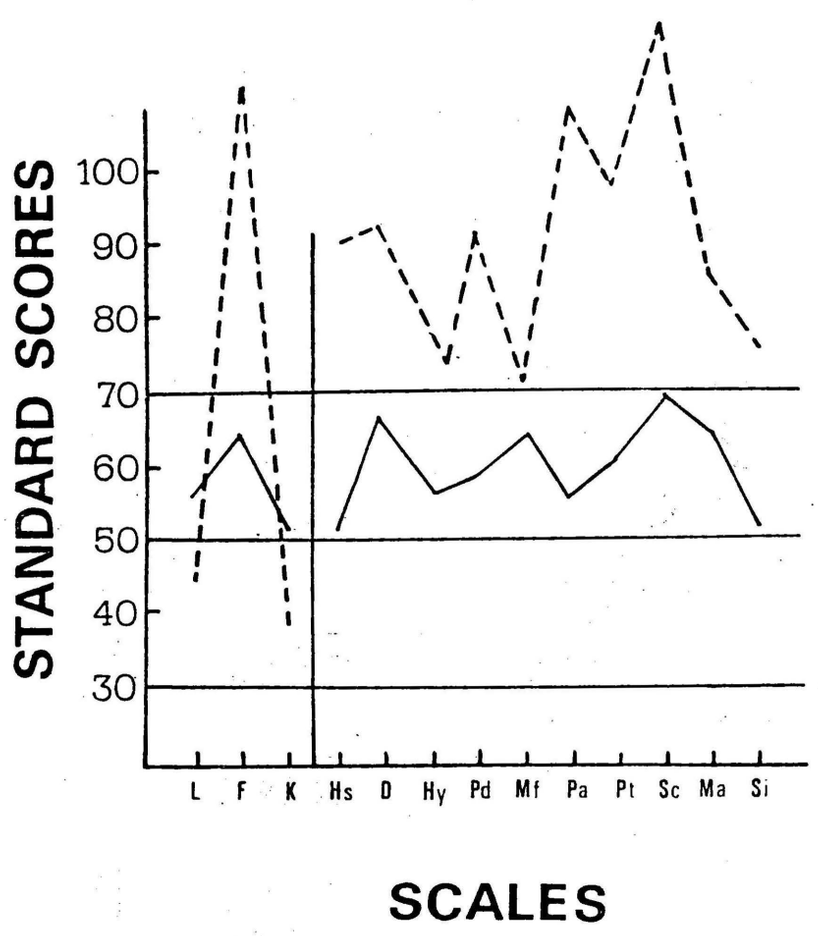


Figure 5. MMPI Profiles of Hong Kong College Females Under Fake Good and Fake Bad Conditions

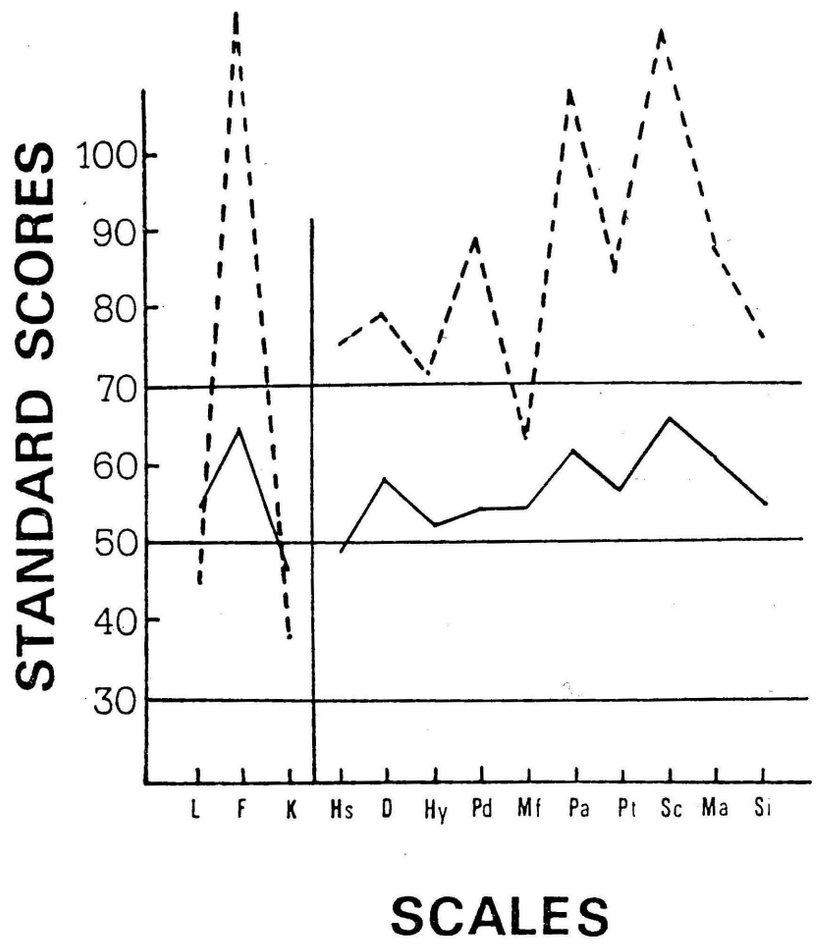
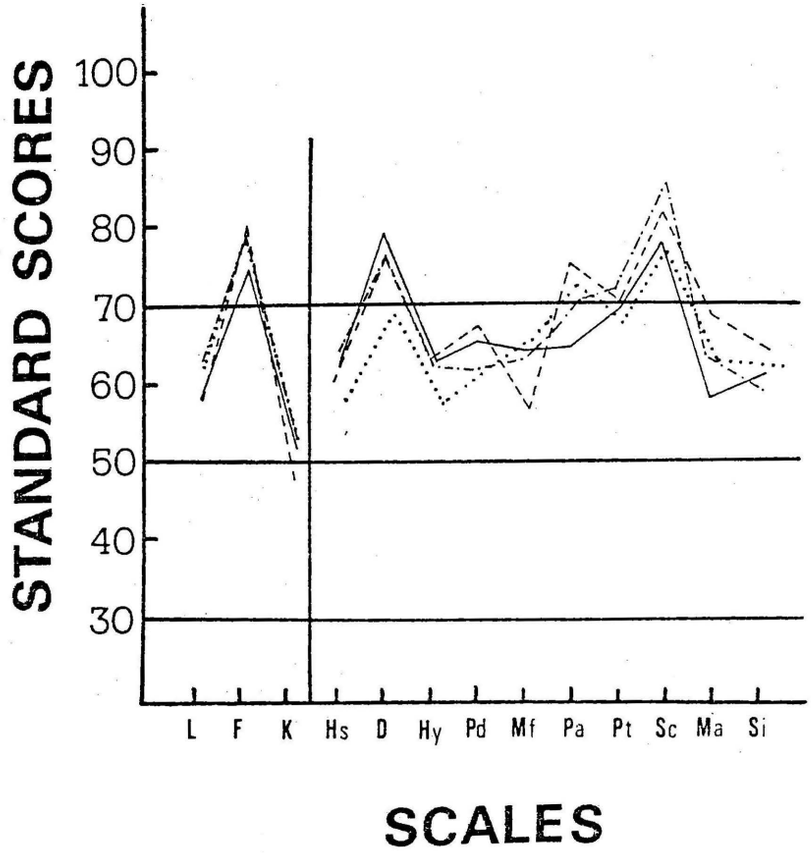


Figure 6. MMPI Profiles of Psychiatric Patients in Hong Kong and China



——————— Hong Kong Male Psychiatric Patients (N = 19)

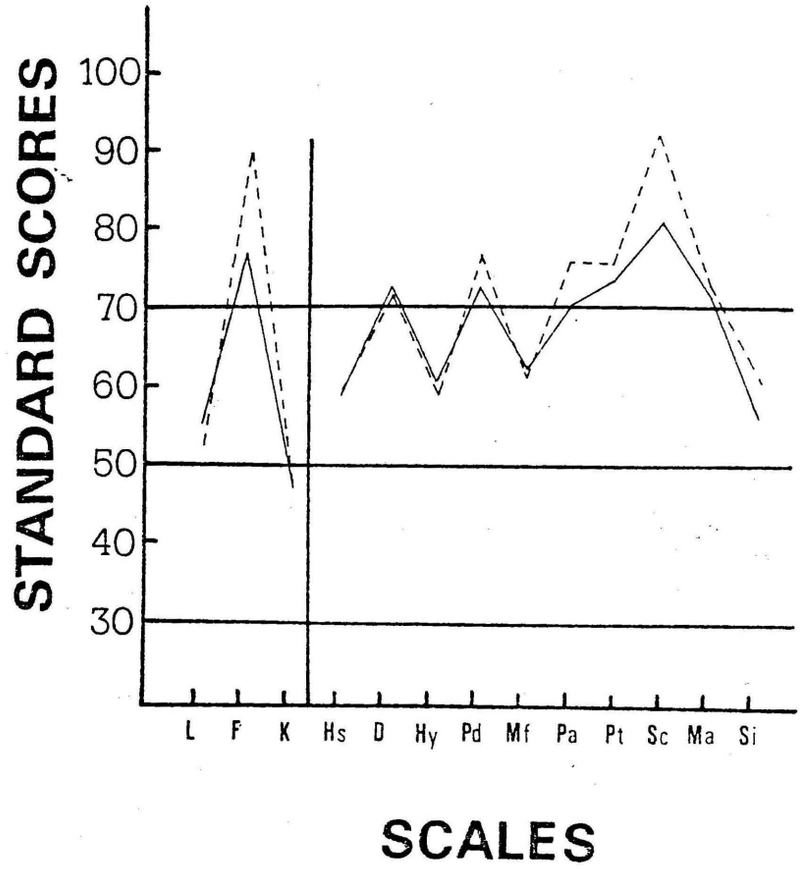
---------- Hong Kong Female Psychiatric Patients (N = 15)

-.-.-.-.-.-. PRC Male Psychiatric Patients (N = 42)[1]

..... PRC Female Psychiatric Patients (N = 45)[1]

[1] From Song (1981)

Figure 7. MMPI Profiles of Prisoners and Juvenile Delinquents in Hong Kong



——————— Male prisoners (N = 39)

---------- Male juvenile delinquents (N = 36)

Figure 8. Mean MMPI Profiles of Hong Kong College Males Scored according to the Original and Revised Keys (N = 229)

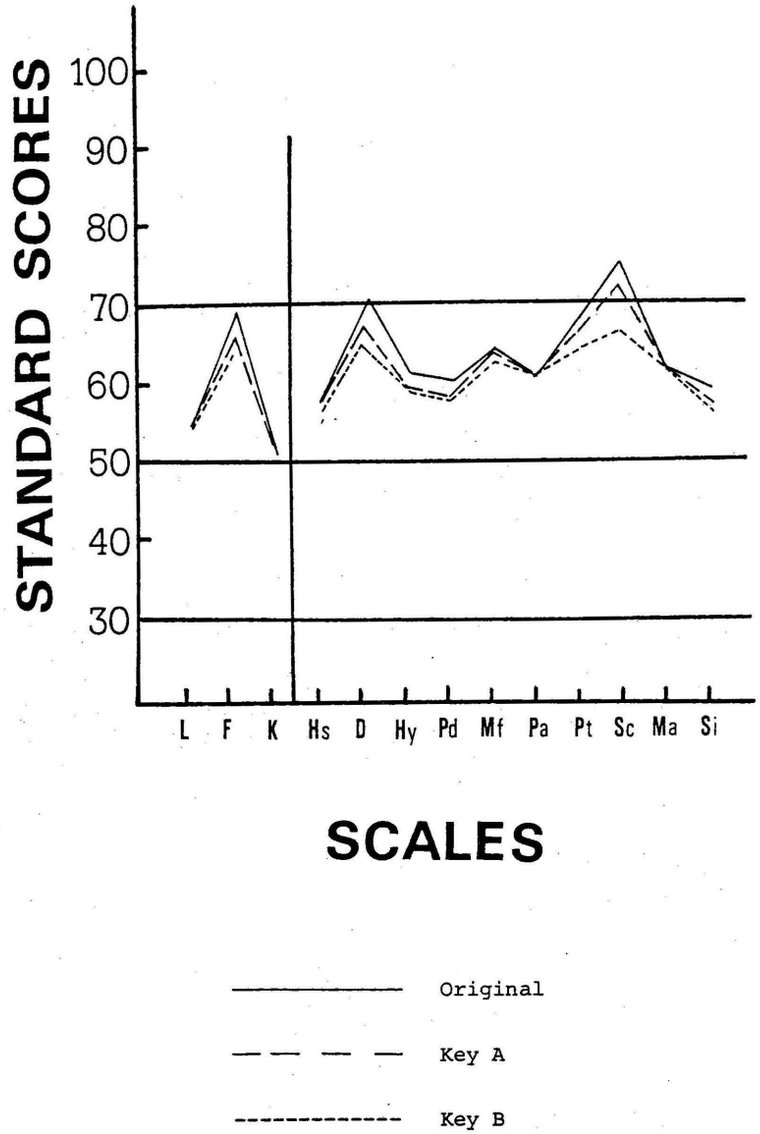


Figure 9. Mean MMPI Profiles of Hong Kong College Females Scored according to the Original and Revised Keys (N = 163)

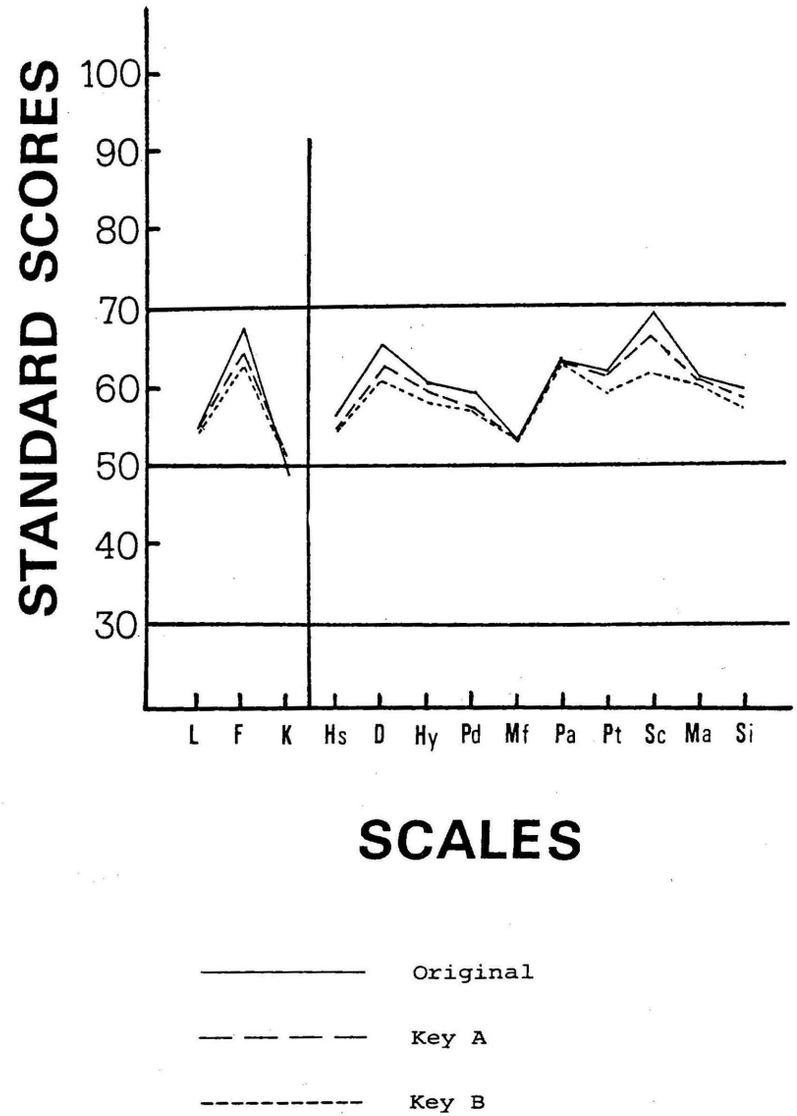


Table 1

Test-Retest Correlations on MMPI Scales for Hong Kong and American College Males

Scale	Hong Kong EC (N=13)	Hong Kong CE (N=15)	Hong Kong CC (N=20)	Hong Kong EE (N=13)	American[a] EE (N=42)
L	.80	.67	.72	.45	.66
F	.61	.84	.94	.95	.84
K	.77	.67	.88	.84	.78
1	.69	.81	.86	.75	.65
2	.77	.89	.78	.88	.69
3	.54	.88	.93	.71	.63
4	.46	.78	.83	.81	.77
5	.71	.86	.35	.86	.72
6	.73	.88	.83	.90	.49
7	.73	.87	.80	.92	.74
8	.64	.77	.93	.84	.79
9	.84	.69	.86	.76	.63
0	.64	.86	.86	.85	.83
Ave.	.69	.81	.81	.81	.71

EC = English-Chinese versions
CE = Chinese-English versions
CC = Chinese-Chinese versions
EE = English-English versions

[a] As reported in Dahlstrom et al. (1975), p. 254.

Table 2

MMPI Items with > 20% Discrepancy in Endorsement Between Hong Kong & U.S. College Males

Scale	Higher Endorsement Items for Hong Kong Males	Lower Endorsement Items for Hong Kong Males	Total No. & % of Discrepant Items
L	15	45, 60, 105, 150, 195	6 40%
F	40, 146, 156, 168, 293	20, 54, 115, 169, 257, 258	11 17%
K	89, 124, 138, 148, 171, 217, 316	160	8 27%
1	189	3, 7, 9, 51, 55, 163, 188, 274	9 26%
2	41, 58, 67, 89, 104, 138, 182, 189, 233, 236, 259, 271	9, 51, 95, 107, 122, 131, 145, 154, 160 178	22 37%
3	76, 89, 93, 124, 147, 172, 189, 213	3, 7, 9, 26, 51, 55, 107, 137, 160, 163, 188, 274	20 33%
4	33, 67, 127, 171, 287	20, 24, 37, 107, 137, 231	12 24%
5	4, 70, 89, 213, 217, 254, 282, 297	1, 26, 115, 117, 176, 223, 231, 249, 283	17 28%
6	93, 111, 124, 127, 293, 305, 314, 316, 319, 338	24, 107, 117, 327	14 35%
7	15, 41, 67, 76, 182, 189, 217, 266, 344, 349, 351 352, 358, 366	3, 122, 178	17 35%
8	15, 40, 41, 76, 104, 156, 168, 182, 212, 251, 259, 266, 282, 297, 303, 312, 320, 333, 335, 349, 352, 366	1, 9, 178, 302, 306, 308, 310, 311, 318	30 38%
9	13, 111, 127, 148, 156, 167, 171, 212, 222, 232, 233, 240, 251, 266, 271, 298, 148	105, 119, 181	20 43%
0	33, 67, 111, 124, 138, 147, 171, 172, 236, 254, 316, 369, 374, 376, 378, 379	117, 119, 231, 371, 382, 383, 392, 397	24 34%

Table 3

MMPI Items with > 20% Discrepancy in Endorsement Between Hong Kong & U.S. College Females

Scale	Higher Endorsement Items for Hong Kong Females	Lower Endorsement Items for Hong Kong Females	Total No. & % of Discrepant Items	
L		30, 45, 105, 165, 191, 285	6	40%
F	40, 48, 53, 139, 146, 156, 168, 293	20, 54, 115, 169, 257	13	20%
K	89, 124, 138, 148, 171, 217, 234, 267, 316, 322, 372, 373	30	13	43%
1	161, 189	7, 9, 51, 55, 163, 175, 188, 243, 274, 281	12	35%
2	32, 41, 58, 67, 80, 89, 104, 138, 158, 159, 182, 189, 233, 259, 271, 290	9, 30, 51, 95, 107, 122, 131, 154, 160, 178, 208, 248, 285	29	48%
3	32, 76, 89, 93, 124, 147, 162, 189, 213, 234, 238, 267, 289	7, 9, 30, 51, 55, 107, 137, 160, 163, 175, 188, 243, 274	26	43%
4	24, 32, 33, 67, 94, 106, 171, 244, 267, 287, 289, 294	20, 37, 107, 137, 231, 248	18	36%
5	80, 89, 213, 217, 254, 280, 282, 297, 299	115, 149, 176, 198, 203, 231, 295	16	27%
6	24, 93, 124, 158, 293, 294, 299, 305, 314, 316, 319, 338	107, 268, 281, 327	16	40%
7	32, 41, 67, 76, 94, 159, 182, 189, 217, 238, 337, 344, 349, 351, 352, 358, 359, 361, 366	122, 178	21	44%
8	40, 41, 76, 104, 156, 159, 168, 182, 212, 238, 251, 259, 282, 297, 303, 307, 322, 323, 325, 328, 333, 335, 339, 349, 352, 366	119, 178, 281, 302, 306, 310	32	41%
9	13, 100, 101, 148, 156, 171, 212, 222, 233, 238, 240, 250, 251, 267, 271, 289, 298	119, 105, 181, 268	21	46%
0	32, 33, 67, 124, 138, 147, 171, 236, 254, 267, 316, 359, 373, 374, 376, 378, 381	119, 208, 281, 371, 382, 383, 392, 397	25	36%

Table 4

Item Endorsement Correlations Among Hong Kong and U.S. Normals

	HK college males (N=94)	HK college females (N=93)	HK factory females (N=60)	US college males (N=3278)	US college females (N=2369)
HK college males	—	.89	—	.74	.71
HK college females			.87	.59	.67
HK factory females				—	.59
US college males				—	.92
US college females					—

Table 5

The Number & Percentage of MMPI Basic Scale Items which were Rated More and Less Desirable by the Hong Kong Students over the U.S. Students

Scale	More Desirable Items	Less Desirable Items	No. & % of Different Items	
L	-	30, 285	2	13.3%
F	40, 156, 168	20, 257, 258, 276	7	10.9%
K	138, 171	30, 160, 296	5	16.7%
1	-	9	1	2.9%
2	41, 52, 67, 104, 138, 182, 259	8, 9, 30, 64, 80, 89, 95, 122, 154, 160, 207, 208, 233, 236, 248, 271, 285, 296	24	40.0%
3	76, 213	8, 9, 30, 89, 160	7	11.7%
4	67, 171	8, 20, 37, 248, 296	7	14.0%
5	213, 282	69, 80, 89	5	8.3%
6	-	-	0	0.0%
7	41, 67, 76, 102, 182, 266, 343, 344, 349, 351, 352	8, 122, 353	14	29.2%
8	40, 41, 52, 76, 104, 156, 168, 182, 194, 212, 251, 259, 266, 282, 303, 307, 312, 331, 333, 339, 349, 352	276, 302, 310	25	32.1%
9	156, 171, 194, 212, 251, 266	64, 233, 271	9	19.6%
0	67, 138, 171	208, 236, 296, 353, 371	8	11.4%

MMPI - Computerised Chinese Version (MMPI-CCV)

P.C. Fong, Queen Mary Hospital
Eddie K.W. Li, Castle Peak Hospital
Eddie K.M. Shen, Castle Peak Hospital
Hong Kong

The value of the MMPI in clinical practice has been well documented in the literature across many cultures. In Hong Kong, the first official Chinese translation was undertaken by Cheung and Ting in 1976. Subsequently, there has been a growing need for more efficient and reliable administration and scoring of the Inventory. In view of this, together with the advancement of computer technology, a Computerised Chinese Version of the MMPI was introduced for experimental use.

The software package consists of 4 floppy diskettes, namely, a System Master, a Data Disk and the Male and Female Questionnaire Disks. The package is designed for use on any Apple-II compatible system with:-

- at least 48K memory
- a Chinese Character Controller Card
- a printer
- a green monitor

The Chinese Character Controller Card enables the system to display Chinese characters on screen. Each character is constructed with no more than 5 Chinese radicals. However, neither the clinician nor the subjects

has to be versed in this in order to use the system or take the test.

The first 400 items on Form R of the revised Hong Kong version (1984) of the Chinese MMPI are included. Only the first 399 items of the MMPI-CCV are used to generate the basic profile. The 400th item is included to satisfy the programme design, and response to this item is not scored.

The MMPI-CCV is a user-friendly, menu-driven interactive system. All instructions are given in Chinese and the items are presented individually in order. Subjects are required only to push the 'Y' or 'N' key to respond. An item may be skipped (the '?' response) by pressing the 'RETURN' key, but this would not be directly displayed on the screen to avoid unnecessary promotion of such responses. The next item will appear only when the subject has responded to the existing item. To cater for subjects who spend excessively long time on an individual item, an auto-skip function is incorporated so that only 90 seconds will be allowed for one item before it is skipped to the next. By the end of the first presentation of the 400 items, those items which have been skipped or given the '?' response will be presented for a second time for reconsideration. Other special functions to allow subjects to return to previous items and to allow subjects to terminate the test in the middle of the assessment are

also included, together with an auto-check function to ensure that scoring for the appropriate sex is used.

The subjects, responses are stored in a Data Disk and may be retrieved to give an on-screen graphical presentation of the profile as well as a hard-copy report consisting of:-

- a personality profile with scores on each of the Validity and Clinical Scales,
- a record of all 400 responses, and
- a record of all the items on each Scale on which the subject has scored (Appendix 1).

In one trial use of the MMPI-CCV on psychiatric in-patients, it was discovered that subjects' motivation was generally improved as compared to taking the paper-and-pencil form. Time spent on administration and scoring has been considerably reduced. In addition, reactions to individual items which might be of clinical significance may be observed for further exploration. It is also envisaged that as the data files accumulate, statistical manipulations may be done to further clinical research on the MMPI and eventually lead to the compilation of a local norm for the general population, and for specific clinical groups.

Note

All item numbers cited in the text or tables refer to Form R of the MMPI.

Appendix 1

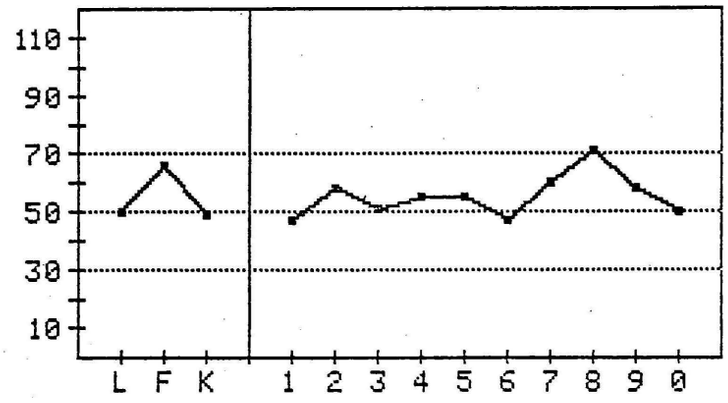
THE MMPI-CCV REPORT
----- Computerized Chinese-MMPI Version -----

NAME :
PSYCHOLOGIST : EDDIE LI

SEX/AGE : M/27
REF. NO.: M /84

CENTRE : CPH
DATE : 13.2.84

PERSONALITY PROFILE



SCORES OF INDIVIDUAL SCALE :

Scale & Abbreviation		Raw score	Kc score	Tc score
L		4	4	50
F		10	10	66
K		12	12	49
?		0		
Identical Pairs (16)		15		
Hypochondriasis	(1:Hs)	4	10	47
Depression	(2:D)	20	20	58
Hysteria	(3:Hy)	17	17	51
Psychopathic deviate	(4:Pd)	16	21	55
Masculinity-femininity	(5:Mf)	23	23	55
Paranoia	(6:Pa)	7	7	47
Psychasthenia	(7:Pt)	16	28	60
Schizophrenia	(8:Sc)	21	33	71
Hypomania	(9:Ma)	18	20	58
Social introversion	(0:Si)	25	25	50

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HONG KONG 1984

Appendix 1 (Cont'd)

THE MMPI-CCV REPORT
----- Computerized Chinese-MMPI Version -----

NAME :
PSYCHOLOGIST : EDDIE LI

SEX/AGE : M/27
REF. NO.: M /84

CENTRE : CPH
DATE : 13.2.84

1	N	2	Y	3	Y	4	N	5	Y	6	N	7	Y	8	Y	9	Y	10	N
11	N	12	Y	13	N	14	N	15	Y	16	N	17	Y	18	Y	19	N	20	N
21	N	22	N	23	N	24	N	25	N	26	Y	27	N	28	N	29	N	30	Y
31	N	32	N	33	N	34	N	35	N	36	Y	37	Y	38	Y	39	N	40	N
41	N	42	N	43	N	44	N	45	N	46	Y	47	N	48	Y	49	N	50	N
51	Y	52	N	53	N	54	Y	55	N	56	Y	57	Y	58	Y	59	Y	60	Y
61	N	62	Y	63	Y	64	N	65	Y	66	N	67	Y	68	Y	69	N	70	Y
71	N	72	N	73	Y	74	N	75	Y	76	Y	77	N	78	Y	79	Y	80	Y
81	N	82	Y	83	Y	84	Y	85	N	86	N	87	N	88	Y	89	Y	90	N
91	Y	92	Y	93	Y	94	N	95	N	96	Y	97	N	98	Y	99	Y	100	Y
101	Y	102	Y	103	Y	104	Y	105	Y	106	Y	107	Y	108	N	109	N	110	N
111	Y	112	Y	113	Y	114	N	115	Y	116	N	117	Y	118	Y	119	Y	120	Y
121	N	122	Y	123	N	124	Y	125	N	126	Y	127	N	128	Y	129	Y	130	N
131	Y	132	Y	133	Y	134	Y	135	Y	136	N	137	Y	138	Y	139	N	140	Y
141	Y	142	Y	143	N	144	N	145	N	146	Y	147	Y	148	Y	149	N	150	N
151	N	152	Y	153	Y	154	N	155	Y	156	N	157	Y	158	N	159	N	160	N
161	N	162	N	163	Y	164	Y	165	Y	166	Y	167	Y	168	Y	169	Y	170	Y
171	Y	172	N	173	Y	174	Y	175	Y	176	Y	177	Y	178	Y	179	N	180	N
181	Y	182	Y	183	N	184	N	185	Y	186	N	187	Y	188	Y	189	N	190	Y
191	N	192	Y	193	N	194	N	195	Y	196	Y	197	N	198	Y	199	Y	200	N
201	Y	202	Y	203	N	204	Y	205	N	206	Y	207	Y	208	Y	209	N	210	N
211	Y	212	N	213	Y	214	N	215	N	216	N	217	N	218	N	219	Y	220	Y
221	Y	222	Y	223	Y	224	Y	225	Y	226	N	227	Y	228	Y	229	Y	230	Y
231	Y	232	Y	233	N	234	Y	235	Y	236	Y	237	Y	238	Y	239	Y	240	Y
241	N	242	Y	243	Y	244	Y	245	N	246	Y	247	N	248	N	249	Y	250	Y
251	N	252	N	253	Y	254	Y	255	N	256	N	257	Y	258	Y	259	Y	260	N
261	Y	262	Y	263	N	264	Y	265	N	266	N	267	N	268	Y	269	N	270	Y
271	Y	272	Y	273	N	274	N	275	N	276	Y	277	N	278	N	279	N	280	Y
281	Y	282	N	283	Y	284	N	285	Y	286	N	287	Y	288	N	289	Y	290	N
291	N	292	N	293	N	294	N	295	Y	296	N	297	Y	298	Y	299	Y	300	Y
301	Y	302	Y	303	Y	304	Y	305	N	306	Y	307	N	308	N	309	Y	310	N
311	Y	312	N	313	Y	314	Y	315	N	316	Y	317	N	318	Y	319	N	320	Y
321	N	322	Y	323	N	324	N	325	N	326	N	327	Y	328	N	329	N	330	Y
331	N	332	N	333	Y	334	N	335	N	336	N	337	N	338	N	339	N	340	N
341	N	342	N	343	Y	344	N	345	N	346	N	347	Y	348	Y	349	N	350	N
351	N	352	Y	353	N	354	N	355	N	356	Y	357	N	358	N	359	N	360	N
361	N	362	N	363	N	364	N	365	N	366	N	367	Y	368	Y	369	N	370	Y
371	Y	372	N	373	N	374	Y	375	N	376	N	377	Y	378	Y	379	Y	380	Y
381	Y	382	Y	383	Y	384	Y	385	Y	386	Y	387	Y	388	N	389	N	390	Y
391	N	392	N	393	N	394	Y	395	N	396	Y	397	Y	398	N	399	N	400	Y

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Appendix 1 (Cont'd)

THE MMPI-CCV REPORT
----- Computerized Chinese-MMPI Version -----

NAME :
PSYCHOLOGIST : EDDIE LI
SEX/AGE : M/27
REF. NO.: M. /84
CENTRE : CPH
DATE : 13.2.84

--SCALE--	-------- ITEM NUMBER THAT SCORES IN CORRESPONDING SCALE --------
Hs	55, 62,130,274,
D	5, 39, 64, 67, 95,104,138,142,145,154,160,182,191,233,236,241, 248,259,263,296,
Hy	6, 55, 71, 76,109,136,160,162,172,180,238,253,265,267,274,279, 292,
Pd	20, 38, 67, 84,102,106,118,180,183,224,239,244,248,267,294,296,
Mf	1, 19, 28, 70, 78, 81, 92,116,126,132,134,140,144,187,204,214, 231,239,260,261,295,297,299,
Pa	109,157,202,294,299,314,319,
Pt	15, 67, 76,102,106,142,164,182,238,301,304,329,343,352,353,356,
Sc	15, 46, 76,104,143,157,168,182,202,236,238,259,297,301,303,310, 311,320,333,352,356,
Ma	59, 73,100,134,157,167,180,181,222,228,232,238,240,250,267,268, 271,298,
Si	25, 33, 67, 82,111,117,124,138,147,171,193,201,296,304,316,353, 359,370,378,379,385,388,391,392,395,
L	45, 90,150,255,
F	20, 48, 56,146,168,202,206,211,227,246,
K	39, 71, 96,160,180,183,217,267,296,372,373,375,
?	NONE

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HONG KONG 1984

Analysis of the Results on the Chinese MMPI Among Normals in China

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In the three-year trial period on its use, the Chinese MMPI was found to demonstrate reliability and validity to a certain extent, especially in clinical use (Song et al., 1980; The National Coordination Group of MMPI in China, 1982). At the same time, some problems were found: the Inventory was too long and some subjects were not willing to answer many of its items; the subjects could not exactly understand some of the items; and on many items, the answers of the Chinese subjects differed from those of American subjects. These problems would affect the validity of the Inventory and limit its applications in its present form. There may be many reasons for these problems. One of the main reasons is that this Inventory was developed in the West. The item content as well as the scoring standards may not fit our country. Therefore, analysing the items of the Inventory and formulating our own standards according to the condition of our country is a necessary prerequisite for the use of this Inventory.

Since 1982, we have begun further analysis and standardization of the Inventory. The objectives of the following study are to establish the norm and to explore the characteristics of responses on the MMPI among Chinese.

Preparatory Process

The Revised Edition

In 1980, we revised the Chinese MMPI translated by Dr. Fanny Mui-ching Cheung of Hong Kong (Cheung, 1985). After trial use, we found that there were still many items unsuitable for use in our country. So we retranslated it and made further revisions. In order to make cross-national comparisons, we tried our best to preserve the original meaning. Given that China is a vast country with many different regional dialects, it was important to avoid linguistic misunderstanding among different geographical areas. Our Research Coordination Group chose one experienced representative from each of the six geographical areas (East China, North China, Middle-south China, Southwest China, Northwest China, and Northeast China). In addition, English teachers of the Foreign Languages Institute helped in the discussion and revisions. The revised Inventory is the one used at present.

The reliability of this revised edition and its equivalence with the American edition were tested. The subjects were 62 third-year students of the Foreign Languages Institute and hospital staff members. The subjects were divided into three groups, each taking two trials of the test: Chinese-Chinese, Chinese-English, and English-Chinese. Results indicate that the Chinese-Chinese group (20 subjects) obtained the highest correlation ($r=0.70$), followed by the Chinese-English group ($r=0.65$), while the English-Chinese group had a lower correlation ($r=0.53$). The first two correlations reached 0.01 significance level, while the last reached 0.05 significance level. This shows that the revised edition has a moderate correlation with the original English edition. However, the level of English proficiency of the subjects may have influenced the results of the testing. Having established a reasonable level of correspondence between the Chinese and the English versions, a large-scale study on normal subjects was launched using this Chinese edition.

The Testers

Most of the testers were doctors or psychologists of the psychiatric hospitals. They are trained in psychological testing, and are acquainted with use of the MMPI.

Subjects

We restricted our subjects to the major ethnic group, the Han people. Only subjects with higher than junior middle school education and above the age of 16 were included. In selection, we referred to the 1982 population census. Samples were taken from six geographical areas according to the population distribution. Unfortunately, due to different local conditions, it was difficult to proceed according to the original schedule of stratified sampling based on sex, age, and education. We could only set the quota for subjects according to the population statistics. The number of subjects selected from the six geographical areas is listed in Table 1.

Results on the Basic Scales

The 1982 results on the basic MMPI scales resembled those from 1980 (Song, et al., 1980; The National Co-ordination Group of MMPI in China, 1982). Only a few of the scales were found to have slightly higher scores. The group profiles are shown in Figure 1. Using t-tests, sex differences were found on the raw scores of some scales. Females scored higher than males on Scales 1, 2, 3, 5, 7, and 0, whereas on Scales F, K, and 9, the males scored higher than females (Table 2). However, these sex differences were consistent with the American norm and

have been adjusted in the standard scores (Figure 1).

Subjects of different educational levels were then compared. Males with college education scored higher than the middle-school subjects on Scales K, 3, and 5, but lower on Scales 7 and 8. Female subjects with college education scored slightly higher than the middle-school subjects on Scale 5, but lower on Scales F, 2, 7, 8, and 0 (Table 3).

Age differences were further noted. Scores on Scales 1, 2, and 3 tended to rise with the advancement of age while Scales 7, 8, and 9 tended to decrease with the advancement of age, with the exception of females aged above 46 (Table 4 and 5).

Item Analysis

Analysis of Unanswered Items

Analysis indicated that among the 566 items, only 21 items were answered by less than 95% subjects. Among these items, 14 were on sex, four on religion, and two on the relationship between males and females. Their item numbers were 20, 37, 53, 95, 101, 133, 179, 199, 237, 239, 297, 302, 310, 320, 363, 411, 441, 470, 485, 491, and 519.

Analysis of Item Endorsement

The percentage of endorsement by the Chinese

subjects on each item was compared to that obtained for Minnesota normals (Butcher and Pancheri, 1976). We took 25% as the criterion for determining difference in endorsement between the subjects of the two countries. The results showed that 302 items (76%) in the comparison between males and 283 items (71%) in the female comparison fell within the 25% difference range (Table 6). The items with large differences in endorsement were those reflecting different personality characteristics of the Chinese and the American people. For instance, Chinese subjects, and in particular, Chinese women were more modest about themselves (e.g., answering "true" to items 82, 159, and 259, and "false" to items 9, 54, 122, and 375). They tended to be cautious, deliberate, and less trusting of others (e.g., answering "true" to items 265, 307, 348, 402, and 462). Introversion was indicated by the disinclination to show one's feelings and the preference for living in one's own world (e.g., answering "true" to items 24, 40, 236, 286, 305, and 312). Chinese subjects described themselves as being uneasy with social contact (e.g., answering "true" to items 52, 171, 172, and 344, and "false" to items 57, 309, and 392), as well as being serious (e.g., answering "false" to items 181 and 285, and "true" to item 378). Other items were related to differences in religious beliefs and practices of the two countries, such as items 95, 249, 258, 483 and 488.

Inter-correlations among scales

We examined the correlation between every pair of scales (Tables 7 and 8). Only correlations reaching 0.50 would be included in the following list.

For the males, significant correlations were obtained among the following scales:

L and K

F and 6, 7, 8

K and 7, 8, 9

1 and 2, 3, 7, 8

2 and 3

4 and 8

6 and 7, 8

7 and 8, 9

8 and 9

Results for the females are as follows:

L and K

F and 4, 6, 7, 8, 9

K and 7, 8

1 and 2, 3

2 and 3, 0

4 and 6, 7, 8

6 and 7, 8

7 and 8, 9

8 and 9

It should be pointed out that there is a relationship between these correlations and the internal consistency of the scales. At the same time, there are overlaps in items among some of the scales.

Due to practical constraints, we could not run any further factor analysis. However, the results from the intercorrelations showed that the 13 scales could be divided into four scale-clusters: a) L and K; b) 1, 2 and 3; c) 4, 6, 7, 8 and 9; d) 2 and 0. Analysis of the content of the items on these scales suggests that elevations on the scales in group (a) may reflect the subjects' reluctance to expose their defects. Elevations on the scales in group (b) may reflect the subjects' neurotic characteristics. High scores on the scales in group (c) may reflect psychotic characteristics. Elevations on the scales in group (d) may reflect the introversive characteristics of the subjects, and their worried state while completing the Inventory. These suggestions need further clinical validation.

Discussion

1. In the Chinese test results, all the clinical scales were more elevated than the original MMPI results, especialy for Scales 2 and 8. This might be due to three reasons:

a. The meaning of some items was not clear, so our subjects might have a different interpretation of the same item. For instance, items 156, 182, 194 and 251 are scored on Scale 8. Although our normal subjects did not experience any morbid state, they often interpreted these questions in terms of the normal psychological state and gave more "true" responses, resulting in higher scores on the clinical scale.

b. Chinese are more modest, and tend to present a subdued appraisal of one's own ability. This will also produce higher scores for some clinical scales. For instance, most Chinese would say "false" to item 122 "I seem to be about as capable and smart as most others around me", which is scored on Scale 2.

c. Some items depict cultural differences in social attitudes and behaviour rather than clinical deviance in our country, for example, items on being active in social contact and having a carefree character. Our normal subjects tend to answer in the "pathological" direction of the original MMPI, thus raising the scores on some clinical scales. For instance, more of our subjects answered "false" to items 107, and "true" to items 52, 312 and 344, thereby increasing their scores on Scales 2, 7, and 8.

2. The test results showed that with the advancement of age, the scores on scales depicting neurotic characteristics gradually rose, reflecting that older subjects would be more sensitive, depressed and over concerned about their own body. Their scores on the psychotic scales became lower, showing a decrease in restless characteristics, dissatisfaction and suspiciousness. Whether these results were due to differences in age, or the cohort differences in education and social background of the different generations has yet to be explored.

3. From the analysis of the first 399 items, we found that the endorsement of 76% of the items among males and 71% of the items among females in China and the U.S. was similar. In terms of item-scale correlations, 77% and 73% of the items among males and females respectively fell within the acceptance range. The test-retest reliability of the Chinese edition reached 0.70. We consider the psychometric properties of the Chinese MMPI to be satisfactory. However, to improve the validity of the Inventory, further revisions need to be made in line with the problems raised in our study.

4. Although we have obtained a preliminary Chinese norm, we have not completed the in-depth analyses of clinical

groups. Without the discrimination analysis between criterion groups and normal subjects, an adjusted Chinese norm could not be determined.

Conclusion

Through the standardization project, we can see that the MMPI could be applied with relevance in China. However, there are still many problems that need further research. The results of this study provides a basis for the revision of the Inventory.

Note

All item numbers cited in the text or tables refer to Form R of the MMPI.

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Figure 1. Mean MMPI Profiles for Chinese Male and Female Normals

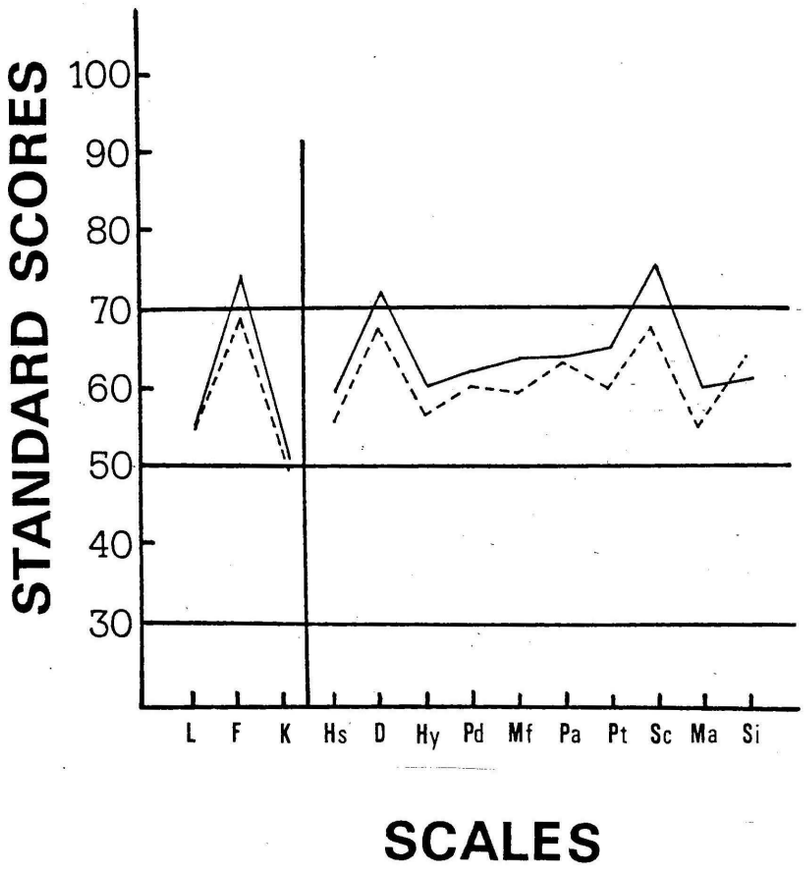

Table 1: Distribution of Normal Subjects from Different Areas of China

	Geographical Area						
	East	North	Middle-south	Southwest	Northwest	Northeast	Total
Male	344	261	352	173	183	240	1553
Female	331	279	378	134	163	231	1516
TOTAL	675	540	730	307	346	471	3069

Table 2: Mean Raw Scores and Standard Deviations on the Basic MMPI Scales Among Chinese Normals

Scale	Male (N=1553)		Female (N=1516)	
	$\bar{X}$	s.d.	$\bar{X}$	s.d.
?	10.17	15.87	10.58	12.02
L	5.70	2.52	5.64	2.48
F	13.68	6.86	11.69	5.02
K	13.00	4.66	12.25	4.26
1	8.78	4.75	9.83	4.98
2	26.16	4.97	28.40	5.04
3	22.07	5.36	22.82	5.54
4	18.98	4.36	18.29	4.45
5	27.56	4.04	31.83	3.86
6	12.84	3.92	12.62	3.93
7	17.86	7.93	18.77	7.82
8	23.01	10.15	22.50	9.57
9	18.48	5.26	16.64	5.16
0	34.51	6.88	37.27	6.71

Table 3: Mean Raw Scores and Standard Deviations on the Basic MMPI Scales Among Chinese Normals with Different Levels of Education

Scale	Male				Female			
	Higher Education (N=384)		Secondary Education (N=1169)		Higher Education (N=251)		Secondary Education (N=1265)	
	$\bar{X}$	s.d.	$\bar{X}$	s.d.	$\bar{X}$	s.d.	$\bar{X}$	s.d.
?	8.88	10.70	10.50	12.16	10.81	10.88	10.54	12.23
L	5.72	2.48	5.70	2.53	5.61	2.53	5.64	2.47
F	13.36	6.95	13.78	6.83	10.57	4.51	11.92	5.08
K	13.71	4.39	12.77	4.73	12.80	4.09	12.14	4.28
1	9.14	4.70	8.66	4.76	9.24	4.92	9.95	4.98
2	26.49	4.23	26.06	5.19	27.39	5.12	28.59	5.00
3	23.00	4.51	21.77	5.58	22.79	5.33	22.83	5.58
4	18.75	3.91	19.06	4.50	17.77	4.31	18.40	4.46
5	28.13	2.44	27.37	4.42	32.44	3.28	31.71	3.95
6	12.79	3.56	12.86	4.03	12.57	3.84	12.63	3.95
7	17.24	7.73	18.06	7.98	17.06	8.01	19.10	7.74
8	22.37	9.92	23.22	10.22	20.72	9.76	22.86	9.49
9	18.05	4.73	18.63	5.41	16.82	5.26	16.61	5.14
0	34.32	6.10	34.57	7.12	35.78	6.58	37.57	6.69

Table 4: Mean Raw Scores and Standard Deviations on the Basic MMPI Scales Among Different Age Groups of Chinese Males

Scale	Age Group							
	16-25 (N=691)		26-35 (N=468)		36-45 (N=240)		46-55 (N=154)	
	$\bar{X}$	s.d.	$\bar{X}$	s.d.	$\bar{X}$	s.d.	$\bar{X}$	s.d.
?	12.11	11.33	9.35	11.77	6.25	12.87	7.31	11.49
L	5.31	2.44	5.99	2.51	5.75	2.63	6.50	2.41
F	12.63	5.36	16.49	8.72	12.31	5.68	11.95	5.44
K	12.29	4.38	13.39	4.63	13.44	5.20	14.39	4.54
1	8.34	4.30	9.19	4.89	8.57	5.16	9.83	5.28
2	25.79	5.02	26.34	4.64	26.53	5.20	26.71	5.27
3	21.50	5.04	22.34	6.28	22.14	5.74	23.71	5.97
4	19.05	4.44	19.29	3.99	19.11	4.51	17.57	4.57
5	27.81	4.25	27.40	3.82	27.40	3.83	27.13	3.96
6	12.98	3.93	13.05	3.95	12.60	3.94	11.97	3.59
7	19.31	7.74	17.68	7.60	16.33	8.31	14.26	7.45
8	23.83	9.15	24.75	10.98	19.95	10.39	18.83	9.18
9	19.56	4.98	18.61	5.25	16.80	5.56	15.88	4.32
0	24.84	7.19	34.57	6.35	34.22	7.17	33.30	6.40

Table 5: Mean Raw Scores and Standard Deviations on the Basic MMPI Scales Among Different Age Groups of Chinese Females

Scale	Age Group							
	16-25 (N=726)		26-35 (N=455)		36-45 (N=231)		46-55 (N=104)	
	$\bar{X}$	s.d.	$\bar{X}$	s.d.	$\bar{X}$	s.d.	$\bar{X}$	s.d.
?	12.74	10.98	8.53	12.46	6.59	13.23	13.15	10.31
L	5.59	2.48	5.57	2.50	6.07	2.56	5.20	2.39
F	11.89	5.03	11.44	4.89	10.94	4.95	12.92	5.76
K	11.66	4.05	12.48	4.52	13.45	4.20	12.43	4.54
1	9.47	4.71	10.18	5.39	10.89	5.23	8.23	3.97
2	28.00	5.09	28.82	5.24	29.60	5.42	26.06	4.84
3	22.20	5.42	23.20	5.78	24.61	6.03	21.08	4.57
4	18.43	4.31	18.04	4.69	17.95	4.91	18.90	4.51
5	31.81	4.03	32.13	4.13	32.57	3.93	28.40	4.52
6	12.89	4.02	12.28	4.01	12.28	3.78	12.71	3.91
7	19.81	7.60	18.03	8.01	16.58	8.01	19.17	7.64
8	23.96	9.26	21.46	9.83	19.45	9.46	23.27	9.63
9	17.49	4.98	15.74	5.06	14.36	4.82	19.45	5.79
0	37.50	6.95	37.69	6.92	36.69	6.94	34.45	6.71

Table 6: Number of Items Endorsed Differently Between Chinese and American Normals

	Percentage of difference in endorsement between Chinese and American Subjects									
	0-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-80	TOTAL
Male	79	73	63	48	39	33	25	10	29	399
Female	78	69	54	45	37	28	24	21	43	399

Table 7: Intercorrelations Among the Basic MMPI Scales for Chinese Normal Males

	L	F	K	1	2	3	4	5	6	7	8	9	0
L	-	-.076	.561	-.130	.048	.135	-.299	-.069	-.163	-.431	-.333	-.377	-.115
F		-	-.294	.467	.218	.189	.411	.133	.581	.780	.750	.463	.208
K			-	-.248	-.051	.240	-.282	-.145	-.217	-.700	-.605	-.508	-.404
1				-	.517	.660	.358	.152	.407	.522	.527	.214	.296
2					-	.511	.316	.171	.222	.406	2.82	-.157	.459
3						-	.320	.166	.255	.150	.142	-.089	.045
4							-	.158	.493	.491	.510	.408	.138
5								-	.267	.225	.226	.129	.095
6									-	.538	.652	.442	.159
7										-	.827	.534	.499
8											-	.645	.386
9												-	-.020
0													-

Table 8: Intercorrelations Among the Basic MMPI Scales for the Chinese Females

	L	F	K	1	2	3	4	5	6	7	8	9	0
L	-	-.236	.535	-.118	.084	.118	-.276	.053	-.176	-.420	-.419	-.382	-.085
F		-	-.412	.373	.198	.156	.549	-.093	.604	.595	.748	.561	.186
K			-	-.233	-.063	.212	-.248	.074	-.297	-.678	-.644	-.491	-.395
1				-	.561	.720	.385	.092	.372	.498	.457	.217	.261
2					-	.565	.335	.112	.233	.430	.297	-.137	.517
3						-	.375	.196	.263	.207	.158	-.027	.047
4							-	.055	.547	.501	.584	.443	.109
5								-	.096	-.019	-.065	-.107	-.004
6									-	.532	.650	.472	.124
7										-	.844	.541	.471
8											-	.666	.351
9												-	-.090
0													-

Trial Use of the MMPI in Psychiatric Diagnosis in Zhenjiang, China: Preliminary Analysis

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The Chinese MMPI has undergone a second revision in China. A norm was obtained from the test results of a large national sample of normal subjects. We are interested in trying out the Inventory in clinical use with psychiatric patients. In particular, we would attempt to use the two-point code type to interpret MMPI profiles, and evaluate the usefulness of these profile characteristics in assisting psychiatric diagnosis. We further compared our results with similar studies done by Zhou, Shi, and Ren in Nantung, Jiangsu (1984), and by Shen, Cai, Wang, and Wang in Chejiang (1983). We hope that these studies would provide the references for the application of the Chinese MMPI in clinical assessment.

Method

Procedure

The administration of the MMPI was conducted according to the standard manual issued by the Institute of Psychology, Academia Sinica to the members of the

National Coordination Group. In choosing the method of administration, two procedures were tried out with two groups of 30 subjects each. In the first group, subjects filled out their answers independently after the instructions were given. In the second procedure, a therapist read out each item to a group of three to four subjects. Comparisons of the two procedures showed that better results were obtained when the items were read out orally. For the oral administration group, 28 of the patients completed the 399 items clearly with less than five unanswered items. For the self-administration group, 10 of the patients responded randomly and their results had to be invalidated. At the same time, a survey of the educational level of 200 acute in-patients showed that only 64% of them reached junior secondary level. These observations suggested that given the specific conditions in China, oral administration for small groups of three to four patients would produce better results.

Scoring

Since the final national norm for China has not been published, scoring in the present study used the K-corrected T-scores according to the original American norm. Only the basic scales were scored using the first 399 items.

Subjects

Given the small number of female patients in our hospital, only 214 male psychiatric patients were included in the present study. The patients were selected on the basis of their clinical diagnoses. Their symptoms were typical and they were currently suffering from an acute episode. Three diagnostic groups were included: schizophrenia, manic-depressive psychosis, and neurotic depression.

The 78 cases of schizophrenics were hospitalized patients aged 18 to 45, having a history of eight months to four years. They were diagnosed according to typical DSM-III criteria.

The 80 cases of manic-depressive psychosis were also male in-patients, aged 20 to 45, and had a history of six months to two years. Diagnoses were made on the basis of DSM-III criteria. Half of the cases had a manic episode with the other half having a major depressive episode.

The 56 cases of neurotic depression were patients attending the out-patient department. They were diagnosed on the basis of ICD-9 criteria. Positive responses to anti-depressive medication were also used for differential diagnosis.

Results

Schizophrenia

The MMPI profiles of 78 male schizophrenic patients were plotted (Figure 1). Concordance between MMPI results and clinical diagnosis was 64% (54 cases). For this group of patients, average T-scores over 70 were obtained on Scales F (88.2), 8 (93.4), 6 (79.9), and 7 (77.6) (Table 1).

The code types on the profiles were further examined for the 54 concordant cases. The most common code types for these schizophrenic patients were 68, 89, and 78, with elevations on Scale F (40 cases). These were followed by the 268, 28, and 248 code types.

A subgroup of 20 schizophrenic patients were further studied. The clinical symptoms of these patients included distinct thought disorders, hallucination, persecutory delusions, ideas of reference, and other bizarre beliefs. The T-scores obtained for these patients were between 85 to 95 on Scale 8, 78 to 85 on Scale 6, and 80 to 90 on Scale F. The typical profile for this subgroup was a 86 code type with an elevated F scale.

Results from studies by Zhou et al. in Nantung, Jiangsu (1984), and by Shen et al. in Hangzhou, Chejiang (1983) were consistent with the present findings. The concordance rates between the MMPI profiles and the

clinical diagnoses were higher in their studies, reaching 80% and 81% respectively. Their higher concordance rates may be due to differences in diagnostic criteria and in the selection of cases. In Zhou et al.'s profile analysis on 55 male schizophrenic patients, the majority (60%) of the cases had a 68 code type, followed by the 78 and the 48 code types. Similarly, for Shen et al.'s 64 schizophrenic patients, the majority (78%) of the cases had a 68 profile. Other common profiles included the 268 and the 248 code types.

Manic-depressive psychosis

Among the 80 cases of manic-depressive psychosis, the clinical concordance rate for the 40 cases of manic episodes was 50% (20 cases). The concordance rate for the 40 cases of depressive episodes was 75% (30 cases). The MMPI profile for the depressed group was characterized primarily by the elevations on Scales 2 and 8. Other common code types included 27 and 278. Scale F was elevated beyond 70 (Figure 2, Tables 2 and 3).

The results suggest that applications of the MMPI profile analysis on major depression may be more relevant and reliable than on manic cases. Among the 40 manic cases, Scales 6 and 8 were among the highest scores although Scale 9 was more elevated than the depressed cases. These profiles may be confused with the profile

for schizophrenic patients. Furthermore, when the manic episodes subsided, the profiles of these patients approached those of normal subjects. These conclusions concurred with Zhou et al.'s (1984) report on 10 manic cases and Shen et al.'s (1983) report on 16 cases. Given the small number of cases, further data should be collected on this group.

Neurotic depression

The clinical concordance rate obtained for the 56 cases of neurotic depression was 71% (40 cases). The diagnosis of neurotic depression in China in the past had been rare. For the past 20 years, the diagnosis of neurasthenia has been more prevalent. In recent years, more attention is paid to neurotic depression. It was found that some of the previous cases of neurasthenia could have been diagnosed as neurotic depression. The use of MMPI to assist diagnosis in these cases would be relevant.

The typical profile for our cases of neurotic depression was the 123 code type, with T-scores for Scale 2 between 85 to 95 (Figure 3, Table 4). If Scale 2 falls between T-scores of 70 to 80, it would be more difficult to differentiate between neurotic depression and neurasthenia. Given elevations on Scale 2 in conjunction with Scales 8 and 6, the probability of a diagnosis of

endogenous depression is indicated.

Conclusions

Our preliminary report is based on a small number of cases. The results suggest that MMPI would be valid for clinical interpretation in a number of diagnostic categories, including schizophrenia, major depression, and neurotic depression. One should, however, take a cautious approach in MMPI interpretation, taking into account the elevations observed on scales 8 and 2 among normal subjects. Further studies on clinical groups with larger samples are needed to support the validity of the Chinese MMPI.

References

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Zhou, Q.F., Shi, L.Q., and Ren, Y.S. (1984) A summary of the MMPI profiles of 210 psychotic and neurotic patients. Paper presented at the Jiangsu Medical Psychology Conference, Jiangsu, China, November. (In Chinese).

Figure 1. Mean Profile of 78 Male Schizophrenic Patients

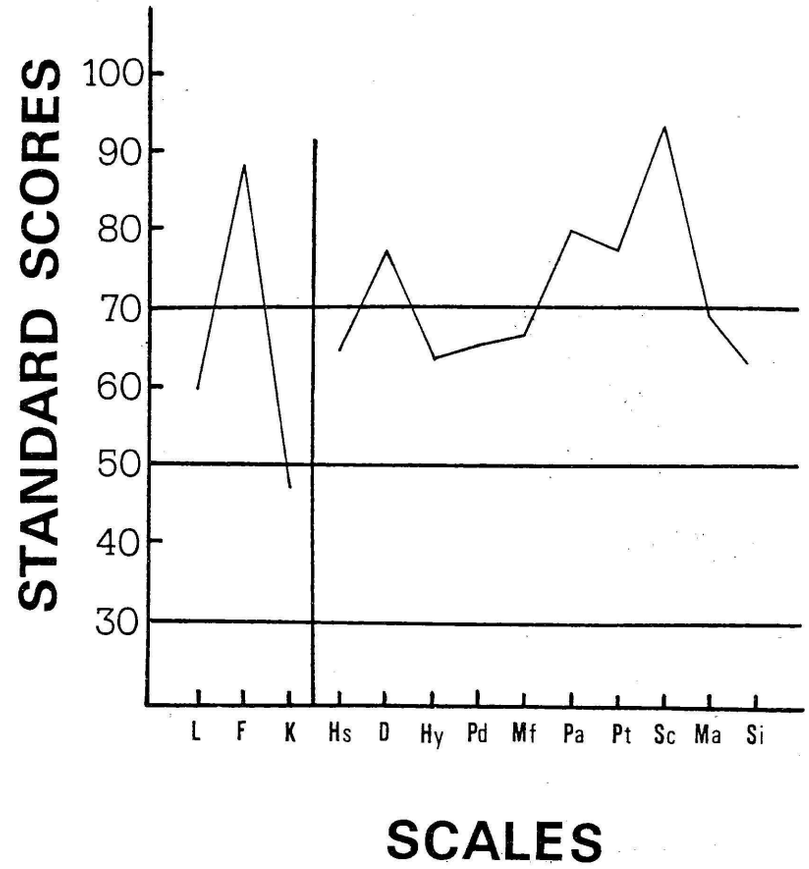
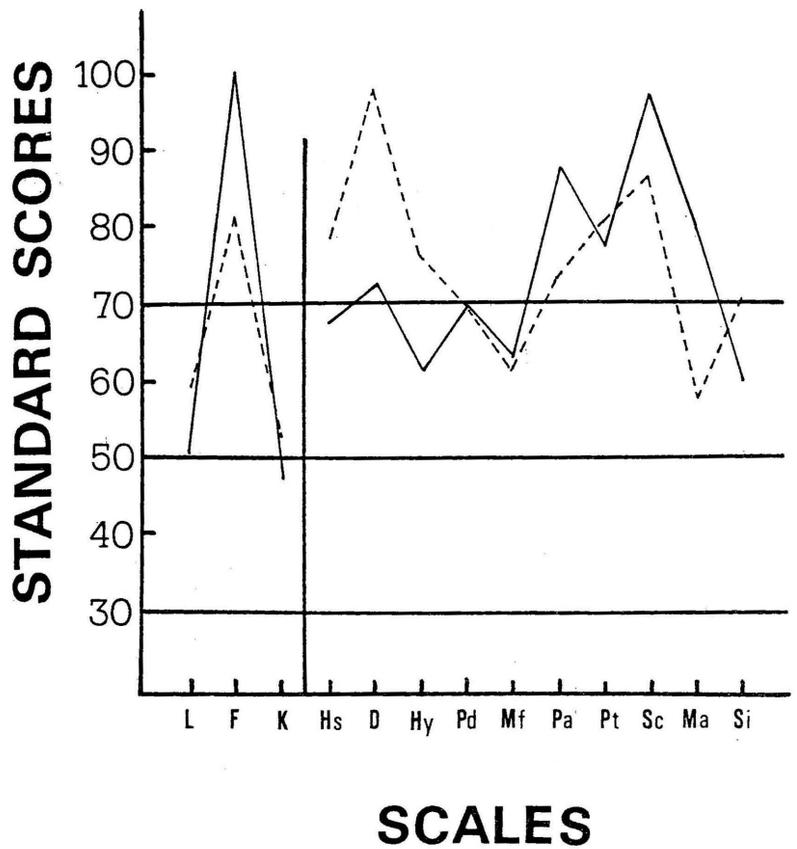


Figure 2. Mean Profile of Male Patients with Manic-depressive Psychosis



———— manic episode

---------- depressive episode

Figure 3. Mean Profile of 56 Male Patients with Neurotic Depression

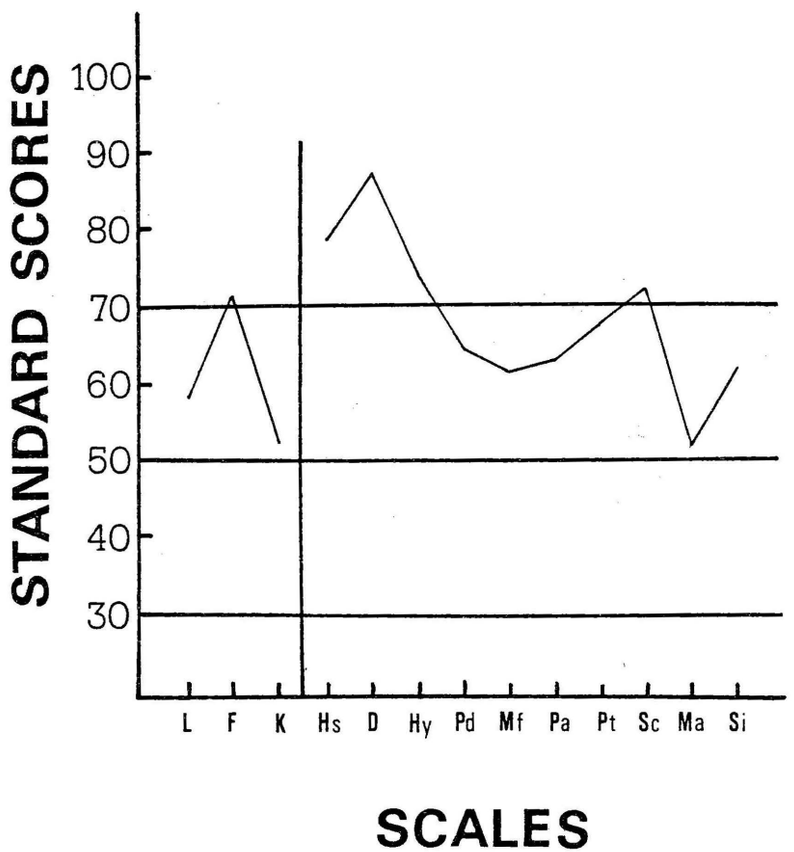


Table 1. MMPI Scores of 78 Male Schizophrenic Patients

	Raw Score		K-corrected T-score	
	Mean	s.d.	Mean	s.d.
L	7.0	±3.21	59.5	±10.8
F	19.9	±7.96	88.2	±17.8
K	10.9	±6.16	47.1	±11.38
1	11.7	±4.53	64.7	±13.35
2	28.9	±5.28	77.4	±12.33
3	25.1	±6.10	63.7	±11.31
4	21.0	±5.17	65.3	±12.29
5	29.0	±4.5	66.7	±10.13
6	18.4	±4.49	79.93	±13.38
7	26.1	±8.8	77.6	±10.29
8	35.5	±11.6	93.4	±11.57
9	22.1	±6.46	68.9	±15.75
0	36.4	±6.78	63.1	± 7.33

Table 2. MMPI Scores of 40 Male Cases of Manic-depressive Psychosis with Manic Episodes (N=40)

	Raw Score		K-corrected T-score	
	Mean	s.d.	Mean	s.d.
L	4.35	± 2.31	50.94	± 7.61
F	25.05	± 9.91	100.23	±28.01
K	10.64	± 4.87	46.94	± 9.30
1	13.94	± 5.44	67.76	±11.25
2	28.58	± 5.35	72.70	±11.80
3	23.94	± 6.34	61.76	±11.48
4	23.05	± 5.09	69.76	±10.40
5	30.11	± 4.10	63.17	± 8.27
6	20.94	± 6.05	87.82	±17.72
7	27.94	± 9.25	77.64	±12.23
8	37.64	±12.39	97.47	±16.40
9	26.76	± 5.68	79.94	±13.03
0	35.05	± 8.78	61.23	± 9.49

Table 3. MMPI Scores of 40 Male Cases of Manic-depressive Psychosis with Depressive Episodes (N=40)

	Raw Score		K-corrected T-score	
	Mean	s.d.	Mean	s.d.
L	6.83	±2.86	59.16	± 9.52
F	17.56	±6.19	82.03	±16.71
K	12.13	±4.51	53.13	±12.41
1	18.06	±4.37	78.50	±11.96
2	39.56	±4.20	97.80	± 9.06
3	32.13	±6.44	76.36	±10.85
4	22.16	±3.81	69.70	± 8.86
5	29.53	±4.28	61.13	± 7.46
6	15.73	±3.84	73.03	±11.59
7	28.66	±6.35	80.26	± 9.78
8	31.40	±8.65	86.26	±10.36
9	17.13	±5.00	57.16	±11.61
0	42.96	±5.33	70.30	± 5.26

Table 4. MMPI Scores of 56 Male Patients with Neurotic Depression

	Raw Score		K-corrected T-score	
	Mean	s.d.	Mean	s.d.
L	6.52	±2.61	58.04	± 8.69
F	12.56	±4.31	71.36	±12.11
K	13.48	±4.04	52.12	± 7.66
1	16.36	±4.79	78.56	±12.06
2	33.36	±5.25	87.16	±13.07
3	30.2	±6.37	74.0	±11.89
4	19.72	±4.85	64.4	±11.75
5	27.0	±4.17	61.28	± 7.22
6	12.4	±3.68	62.72	±10.71
7	18.32	±6.65	67.16	±10.02
8	20.76	±8.36	72.04	±11.20
9	14.84	±4.41	51.8	±11.16
0	35.6	±9.28	61.72	±10.32