

VALIDATION OF URDU VERSION OF MINNESOTA MULTIPHASIC PERSONALITY INVENTORY (MMPI) AS A DIAGNOSTIC TOOL[#]

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The purpose of this study was to assess the validity of MMPI (Urdu version) as a measure of mental health for Pakistani population and to justify its usage in various researches pertaining to mental health. For this purpose, CPI a culturally valid test within Pakistan was used as a criterion. The CPI is a measure of social and interpersonal relationship whereas MMPI is designed to measure mental health. As the sample consisted mainly from the general population with no apparent psychiatric history, therefore, instead of the whole scales, only the Neurotic Triad (i.e., Depression, Hypochondriasis, and Hysteria) was selected from the MMPI. A high score on CPI would simply signify healthy personality whereas on the Neurotic Triad of MMPI it would indicate neurotic trends. The present research was designed keeping in view the philosophy of the construct of the two tests, as one expects an inverse correlation between these two measures of personality. A heterogeneous sample of 695 males completed the two tests. Contrary to our hypothesis, significant positive correlations were obtained between majority of the scales of CPI and the Neurotic Triad of MMPI.

Psychologists in many countries administer personality inventories and other questionnaires, which have been standardized and validated on samples other than the population of their own countries. They ignore an important fact that cultural differences might contaminate and affect the responses on different items, grouped under various scales, thus leading to spurious results. The problem aggravates when the language of the tests is different for the

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population being tested. If the test is in English and administered on English speaking population the result may not be as variant as when used on non-English speaking population, such as Pakistan. Even if it is translated into the native language (Urdu) as in our case, still it would not serve the purpose and the meaning of the words, having different connotation from the English would not convey its actual flavour.

Because of the incorporation of idiomatic language in the items, and because of their emphasis on ego-syntonicity, translation, cannot be merely literal. What is called for is 'psychological translation', in which the underlying psychology of each item is rendered into an idiomatic and ego-syntonic expression in the new language. If this is done competently, the folk scales should function in their new format in the same way that they do in the original (Gough, 1998).

Therefore, every country and for that matter every cultural group must develop their own psychological tests for measurement of psychological concepts. In Pakistan, not much effort has been made so far to develop properly validated and reliable tests. Psychologists, here, are usually busy in translation and adaptation of the tests developed in the West representing western lifestyle. Perhaps because of the non-availability of the representative tests, the users are compelled to employ the translated versions.

California Psychological Inventory (CPI) used in the present research was initially developed by Gough (1957). It represents work over a period of years. There are now eight complete published versions of the CPI, with manuals and appropriate norms, in France, Germany, Great Britain, Italy, Japan, Romania, Russia, and Spain. Authorized versions with local norms and some with manuals are available in Australia, Belgium, Brazil, Canada, Denmark, Israel, Mexico, Norway, South Africa, and the People's Republic of China. Research translations have been used in doctoral dissertations and published research in the following languages: Arabic, Greek, Korean, Malaysian, Polish, Sinhalese, Thai, and Urdu (Gough, 1998). In CPI, there are four clusters of scales measuring: (i) Poise, ascendancy, self-assurance, and interpersonal adequacy; (ii) Socialization, maturity, and social responsibility; (iii) Achievement potential and intellectual efficiency, and (iv) Personal orientation and attitude towards life. Fifteen scales out of 18 provide scores on personality dimensions, such as, Dominance, Capacity of status, Sociability, Social presence, Self-acceptance, Responsibility, Socialization, Self-control, Tolerance, Achievement-via-

conformance. Achievement-via-independence. Intellectual efficiency. Psychological mindedness. Flexibility. and Femininity. Three of its scales Well-being. Good Impression. and Communality are the validity scales designed to check the fake 'good' 'bad' and highly popular responses. The CPI manual (Gough, 1969, 1987) reports the correlation between the eighteen scales and the Edwards Personnel Preference Schedule (EPPS, Edwards, 1959). Guilford Zimmerman Temperament Schedule (GSTZ, Guilford & Zimmerman, 1978). the 16PF (Cattell, Eber. & Tatsuoka, 1970) and the Strong Vocational Interest Blank (SVIB, Campbell & Hansen, 1981). From the beginning, the primary goal of the CPI has been to assess significant dimensions of normal personality, in such a way as to permit predictions and conceptualizations of important criteria such as leadership, creativity, delinquency, scholastic achievement, personal adjustment, occupational preferences, and performance; and life span outcome such as good health, life satisfaction, and career attainment (Gough & Bradley, 1999).

Minnesota Multiphasic Personality Inventory (MMPI). the second instrument used for the present study is a standardized inventory. It is designed to elicit a wide range of self-descriptions from each subject and to provide in quantitative form a set of evaluations of personality status and emotional adjustment. It is composed of three validity indicators: Lie (L), Validity (F), and Correction (K); and ten clinical scales: Hypochondriases (Hs), Depression (D), Hysteria (Hy), Psychopathic deviate (Pd), Masculinity/femininity (MF), Paranoia (Pa), Psychasthenia (Pt), Schizophrenia (Sc), and Hypomania (Ma). Whereas, Depression (D), Hypochondriases (Hs), and Hysteria (Hy) together constitute and measure the Neurotic triad. The original normative data were derived from a sample of about 700 normal population with an additional 250 pre-college and college students' data. The scales were then validated by contrasting the normal groups with clinical cases. The reported reliability of the MMPI appears to be quite satisfactory as well. Hathaway and Mckinley (1967) reported test-retest coefficient for six clinical variables. As for validity, a high score on a scale has been found to predict positively the corresponding final clinical diagnosis in more than 60% of new psychiatric admissions. Even in cases in which high score is not followed by a corresponding diagnosis, the presence of the trait to abnormal degree in the symptomatic picture will nearly always be noted (Hathaway & Mckinley, 1967).

MMPI (Mirza, 1977) and CPI (Ahmad, 1986) both have been translated in Urdu and adapted on the Pakistani population with reported validity and reliability coefficients for CPI only. The CPI has already been validated upon the present population with its reliability ranging from .72 to .97 (Ashfaq, 2000). CPI has been used in various researches and has proved to be highly reliable and valid instrument (Ahmad, Haque, & Anila, 1994; Ashfaq, 2000). Though a lot of work is also being done on MMPI, however, because of certain psychometric shortfalls as well as lack of proper validation studies the results are often questioned and considered doubtful.

The present research, therefore, attempted to analyze the applicability of MMPI as a measure of mental and physical adjustment in Pakistan and further test its credence upon the Pakistani clientele and the following hypothesis was formulated: There would be an inverse correlation between the scales of CPI and the Neurotic Triad of MMPI.

METHOD

Sample

A sample of 695 men was employed for the study representing North West Frontier Province of Pakistan. Their age range was from 18 to 35 years and their level of education was from Intermediate to Masters and professional level, such as, medical doctors and engineer, etc.

Instruments

1. Urdu translated and adapted version of California Psychological Inventory (CPI) with 18 bipolar scales (Ashfaq, 2000).
2. Urdu version of Minnesota Multiphasic Personality Inventory (MMPI, Mirza, 1977). The Neurotic Triad of MMPI was selected as the sample consisted of normal population and were assumed to be free of major psychiatric disorders, such as schizophrenia, paranoia, psychasthenia, etc. On the other hand, neurotic tendencies, such as, depression could be present among the normal without actually seeking medical help.

Procedure

The subjects were administered the two tests, with a gap of one day. A group of thirty subjects were tested at a time. They were

instructed according to the standard instructional procedure provided by Gough, (1957, 1987) and Hathaway and Mckinley (1967). Each subject took about 90-120 minutes to finish a single test. The raw scores were transformed into standard scores.

RESULTS

Table 1

Correlation Among 18 Subscales of CPI and the Neurotic Triad of MMPI

CPI Subscales	Neurotic Triad (MMPI)		
	Hy	D	Hs
Do	.08	-.03	.10
Cs	.21**	-.12*	.11*
Sy	.08	-.21**	.02
Sp	.17**	-.11*	.08
Sa	.11*	-.02	.01
Wb	.14**	.01	.13**
Re	.19**	.05	.01
So	.05	.51	.10
Sc	.23**	.04	.08
To	.25**	-.07	.10
Gi	.16**	-.08	.57
Cm	.06	.07	.09
Ac	.14**	-.01	.02
Ai	.31**	.08	.18**
Ie	.12*	.01	.10*
Py	.12*	-.08	.07
Fx	.29**	.23**	.31**
Fe	.17**	.29**	.10

* $p < .05$; ** $p < .001$

Table 1 shows the correlation between the 18 scales of CPI and the Neurotic Triad of MMPI. The Correlation pattern reveals general absence of non-correlations with MMPI. Hy scale is significantly correlated to 14 scales of CPI (Cs, SP, Sa, Wb, Re, Sc, To, Gi, Ac, Ai, Ie, Py, Fc, and Fe). D scale is significantly correlated to 5 CPI scales, having significant inverse correlations with (Cs, Sy, and Sp) and positive significant correlations with Fx and Fe. Hs scale has positive correlations with 5 CPI scales (Cs, Wb, Ai, Ie, and Fx), with no inverse correlations.

Table 2
Intercorrelations between the 18 subscales of CPI

CPI Subscales	Cs	Sy	Sp	Sa	Wb	Re	So	Sc	To	Gi	Cm	Ac	Ai	Ie	Py	Fx	Fe
Dominance (Do)	.49 ^{***}	.54 ^{***}	.45 ^{***}	.49 ^{***}	.84 ^{***}	.47 ^{***}	.80 ^{***}	.38 ^{***}	.41 ^{***}	.44 ^{***}	.82 ^{***}	.56 ^{***}	.35 ^{***}	.82 ^{***}	.34 ^{***}	.29 ^{***}	.04
Capacity of status Cs		.62 ^{***}	.67 ^{***}	.45 ^{***}	.48 ^{***}	.41 ^{***}	.32 ^{***}	.48 ^{***}	.65 ^{***}	.63 ^{***}	.27 ^{***}	.51 ^{***}	.54 ^{***}	.47 ^{***}	.52 ^{***}	.20 ^{***}	-.09
Sociability (Sy)			.63 ^{***}	.60 ^{***}	.43 ^{***}	.34 ^{***}	.34 ^{***}	.36 ^{***}	.51 ^{***}	.49 ^{***}	.33 ^{***}	.56 ^{***}	.33 ^{***}	.51 ^{***}	.40 ^{***}	-.01	-.12
Social presence (Sp)				.52 ^{***}	.42 ^{***}	.31 ^{***}	.29 ^{***}	.28 ^{***}	.48 ^{***}	.41 ^{***}	.28 ^{***}	.41 ^{***}	.44 ^{***}	.43 ^{***}	.41 ^{***}	.20 ^{***}	-.07
Self acceptance (Sa)				.38 ^{***}	.38 ^{***}	.33 ^{***}	.36 ^{***}	.27 ^{***}	.33 ^{***}	.34 ^{***}	.33 ^{***}	.45 ^{***}	.23 ^{***}	.43 ^{***}	.26 ^{***}	.08	.09
Well being (Wb)					.51 ^{***}	.51 ^{***}	.87 ^{***}	.56 ^{***}	.53 ^{***}	.56 ^{***}	.86 ^{***}	.61 ^{***}	.46 ^{***}	.88 ^{***}	.37 ^{***}	.37 ^{***}	.06
Responsibility (Re)						.42 ^{***}	.42 ^{***}	.66 ^{***}	.59 ^{***}	.58 ^{***}	.42 ^{***}	.65 ^{***}	.52 ^{***}	.53 ^{***}	.45 ^{***}	.11	.28
Socialization (So)							.41 ^{***}	.41 ^{***}	.35 ^{***}	.38 ^{***}	.86 ^{***}	.50 ^{***}	.32 ^{***}	.83 ^{***}	.24 ^{***}	.35 ^{***}	.12
Self control (Sc)								.73 ^{***}	.73 ^{***}	.79 ^{***}	.34 ^{***}	.73 ^{***}	.59 ^{***}	.50 ^{***}	.59 ^{***}	.14 ^{***}	.22
Tolerance (To)									.75 ^{***}	.75 ^{***}	.27 ^{***}	.64 ^{***}	.68 ^{***}	.51 ^{***}	.59 ^{***}	.18 ^{***}	.01
Good Impression (Gi)										.29 ^{***}	.29 ^{***}	.68 ^{***}	.54 ^{***}	.52 ^{***}	.59 ^{***}	.10	.06
Communality (Cm)											.45 ^{***}	.45 ^{***}	.29 ^{***}	.81 ^{***}	.19 ^{***}	.33 ^{***}	.13
Achievement-Via-Conformance (Ac)												.53 ^{***}	.53 ^{***}	.62 ^{***}	.45 ^{***}	.05	.15
Achievement-via-Independence (Ai)														.46 ^{***}	.57 ^{***}	.33 ^{***}	.15
Intellectual Efficiency (Ie)															.33 ^{***}	.30 ^{***}	.80
Psychological Mindedness (Py)																.14 ^{***}	.01
Flexibility (Fx)																	.17 ^{***}
Femininity (Fe)																	

p* < .05; *p* < .001

Table 2 shows a highly significant intercorrelations among the 18 scales of CPI except for the following: (a) Fx scale has positive but non-significant correlations with Sa, Re, Gi, and Ac and has negative non-significant correlations with Sy, and (b) Fe scale has non-significant correlations with the most of the scales as shown in Table 2. With the following three scales Cs, Sy, and Sp it is inversely related and with six scales, namely Re, Sc, Cm, Ac, Ai, and Fx it has significant positive correlations.

Table 3 shows a highly significant intercorrelations among the Neurotic Triad (Hy-D-Hs) of the MMPI. The range of correlation is from $r = .43$ (D vs. Hs) and $r = .59$ for (Hy vs. Hs).

Table 3

Intercorrelations Among the Neurotic Triad (Hy-D-Hs) of MMPI

	Hy	D	Hs
Hy	-	.45*	.59*
D		-	.43*
Hs			-

* $p < .001$

DISCUSSION

It appears from the results of the study that there is a positive relationship between the Neurotic Triad of MMPI and the scales of CPI. Hysteria (Hy) scale of MMPI is most strongly and positively related to almost entire 14 scales of CPI (i.e., Capacity for status, Social presence, Self-acceptance, Well-being, Responsibility, Self-control, Tolerance, Good impression, Achievement-via-conformance, Achievement-via-independence, Intellectual efficiency, Psychological mindedness, Flexibility, and Femininity). In reviewing Hathaway and Mckinley's (1967) description of the Hysteria scale, they spoke of people who feel exaggeratedly towards stress and develop symptoms, which are physical in nature. The hysterical person is immature in nature and is likely to become overtly hysterical and solve the problems confronting him/her by the development of symptoms. This description of Hy, when contrasted to the 14 scales of CPI mentioned above (with which MMPI has positive significant correlation) as explained by Gough (as cited in Megargee, 1972), needs not to be correlated as

highly and significantly as reported by the present study findings. The 14 scales of CPI attempts to appraise the following qualities, such as, ambition, self-assurance leading to status, and verve, while the average scorer on CPI plainly like others company and take pleasure in an intelligent and manipulative onslaughts against others defenses and weaknesses. Further, they are supposed to be conscientious and comfortably placed in the social dealings with self-worth and be sure of themselves whether active or inactive in social behavior.

Depression Scale (D) of MMPI has also positive significant correlation with the Fx and Fe subscales of CPI, whereas it is inversely but significantly correlated to Cs, Sy, and Sp of CPI. The clinical definition of depression is characterized by features as lack of self-confidence, tendency to worry, narrowness of interests, and introversion. This scale together with Hs and Hy would identify greater proportion of those persons not under care who are commonly called neurotic, as well as those who need psychiatric attention (Mirza, 1977). The significant positive correlations are somewhat surprising as Fx is being defined as the degree of flexibility and adaptability of a person's thinking and social behavior, whereas Fe is designed to assess the masculinity and femininity of interests. These qualities are not to be expected from an individual suffering from clinical depression as diagnosed on MMPI. Perhaps, in certain cases as reported by Mirza (1977), depression could well be hidden for casual observation, and be a so-called 'smiling depression'. The depression in such cases is revealed only through subjects' specific discourse and his outlook on the future. Often such persons are insistent upon their attitude as being a realistic one, since death is inevitable and time passes. The average person may erroneously be not concerned with grim realities of life (Mirza, 1977), and this depression went undetected by the MMPI Depression scale; as a result a positive correlation was obtained. The inverse significant correlation of the D scale and the Cs, Sy and Sp seem to be endorsing our hypothesis, since Depression narrows interests and forces a person to withdraw from daily activities and other normal functioning (Mirza, 1977). Hence, for a person to be self-confident, having poise and verve one requires healthy outlook towards life with energy to participate and move ahead in social festivities and not to withdraw and be shrouded in mist.

The Hs subscale of MMPI was developed to measure the amount of abnormal concerns about bodily functioning, i.e., suggestive of undue worry over health (Mirza, 1977). It describes

persons who have immature approach to adults' problems and tend to respond to them without adequate insight. Rather, their approach is to gain attention and sympathy. However, it is positively and significantly correlated to Cs, Wb, Ai, and Fx. Reverting to the definition of these scales which stress a normal pursuit of daily life activities, with vigor, confidence, vitality, tolerance, and more flexible attitude towards others feelings and thinking, positive correlations are to be least expected for these subscales of MMPI and CPI.

These results have cast doubt on the construct validity of MMPI on Pakistani culture. While using MMPI these results may be considered prior to the administration of the test. MMPI may be very reliable and valid diagnostic instrument but not without geographical and cultural limitations. Though an Urdu version of the MMPI test was used, the results suggest that even a translated version of tests does not produce the desired results. But this hardly means that one should not be on guard while using CPI, it too should be used cautiously and with extra care. Further research is recommended to establish the reliability and validity of the CPI. An extra care in the administration of MMPI is warranted, when dealing with diagnosis for clinical purposes. By making a wrong diagnosis one could easily label or recommend an individual for psychiatric treatment. The pattern of interrelations among the 18 subscales and the Neurotic Triad suggests a highly significant correlation among majority of the scales ranging from .01 to .87 in case of CPI and from .44 to .55 for MMPI. This suggests redundancy of CPI or MMPI as an instrument to be used when considering the cultural milieu of the country. Many researches have been conducted using MMPI in Pakistan, the major one being the translation and adaptation of MMPI in 1970. The reported internal validity and consistency measures of MMPI as an instrument for Clinical use by the psychologists in Pakistan have led researchers to diagnose patients on the basis of MMPI. However, the results of the present study show that MMPI cannot be used as a diagnostic tool unless one takes into account the cultural variations.

Statistical studies regarding reliability and validity are of serious concern. For any psychological test, the reliability coefficient will vary with population tested, i.e., with groups having wide range of scores will yield higher level of reliability or otherwise- but it does not seem to be helpful in the present case- where despite wide range of scores the correlation pattern seem to be improbable (Megargee, 1972) between the regular MMPI scales among normal subjects with two scales accounting for most common variance.

In conclusion, it seems that while CPI and MMPI may be highly internally consistent, intercorrelations between the two are hardly meaningful. This points to the need for research, one which should take into view the difficulties of the reliability and validity estimates as regards the MMPI as a means of diagnosing abnormal personality characteristics. Presumably the personality patterns of normal people are more stable than those of psychiatric patients or psychologically unstable, the problem of relations is aggravated as when a test is measuring unstable traits of personality such as depression, or exaggerated concerns about oneself etc. in a culture other than upon in which the test was initially developed. In view of these difficulties, one must be careful in making reliable diagnosis of certain psychological traits with MMPI.

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