

Pakistan Journal of Psychology, December 2021, 52, 2, 55-65

**ADAPTATION OF THE HAND TEST IN PAKISTANI
CULTURAL CONTEXT**

Fayyaz Ahmed Anjum*

Pakistan Navy

Muhammad Umar Fayyaz

Department of Psychology

National University of Medical Sciences

Rawalpindi, Pakistan

&

Maryam Fayyaz

Department of Professional Psychology

Bahria University Islamabad

ABSTRACT

The present study is a part of large cross sectional study comprising of three phases aimed to adapt, modify, and develop norms of the Hand Test in Pakistani cultural context. The present study focused only on Phase-I which aimed at adaptation of Hand Test. Hence, translation of Scoring Booklet of the Hand Test was done using standard forward and back translation method. Ten new stimuli containing indigenous perspective were conceived in consultation with committee of professionals. A pilot testing was conducted for adaptation of new stimuli on 50 normal and 50 individuals with schizophrenia and mood disorders. Four new stimuli were selected out of a group of 10 stimuli based on their ability to give responses in various scoring categories. Enhanced patterns of the Hand Test have added regional perspective. The implications and future directions were included.

Keywords: *Hand Test, Adaptation, Pakistani, Culture*

* Correspondence Address: Fayyaz Ahmed Anjum, PhD; Psychologist, Pakistan Navy
E-mail: fayyaz_ahmed_66@yahoo.com

INTRODUCTION

The origin of The Hand Test can be traced into Sigmund Freud's psychodynamic orientation. The Hand Test was developed by Wager (1962) modelling Thematic Apperception Test and Rorschach test and consists of the same format (Young & Wagner, 1995) and is presented in stimuli cards called stimulus constancy or pull (Anjum and Batool, 2018). Flaws were observed in Rorschach movement responses and action tendencies (Piotrowski, 1957). The Hand Test belonged to projective techniques family. Researchers and clinicians are of the view that projective techniques are relatively cultural free and difficult to fake (Aiken, 1997; Anastasi, 1997; Kline 1986). However, recent viewpoint somewhat differs and it is postulated that these tests are culture fair and "no test can be entirely culture free as it gives some favor to its habitants" (Anastasi, 1997). Kline (1986) advocates those new projective techniques may be encouraged to develop keeping in view three factors (a) a specific pull of stimulus (b) relatively structured form of stimulus, and (c) ability of stimulus to measure or identify defense mechanisms.

The present author is of the view that certain new stimuli can be incorporated in The Hand Test because they are being used by people of South Asian region specially Pakistan to augment the verbal communication (Anjum & Batool, 2018). The world has been divided into Eastern and Western culture, and both types of culture are likely to foster different traits of personality. For instance Eastern culture tends to foster collectivism and interdependence (Weiton, 2007). On the contrary the Western culture tends to foster individualism and competitiveness (Nisbet, 2001). Stetson and Wagner (1980) conducted a comparison among Chinese, Iranian and Americans on the Hand Test and concluded that individuals belong to different cultures attain high or low scores on different variables of The Hand Test. For instance, Iranian sample got higher score on dependence and lower on action and environmental than American participants whereas Chinese scored higher on communication and interpersonal than American participants (Stetson & Wagner, 1980).

Previously few efforts have been made to modify and adapt The Hand Test for different reasons such as to increase the reliability of the test or to meet the needs of the specific population demographic characteristics. To illustrate, Shinder (1973) and Hardesty (1973) enhanced The Hand Test stimuli from 10 to 20 to increase reliability of The Hand Test as more stimuli of the test increases reliability of the instrument. Jessica (2010) introduced certain Hand Test pattern to her belief

Pakistan Journal of Psychology

that The Hand patterns consists of different gender and age hence are likely to be better perceived by their own sex and age. She modified and enhanced Hand Test patterns stimuli from 10 to 30 to examine gender differences in population with sexual abuse. Similarly, Anjum and Batool (2018) enhanced stimuli and conducted test-retest study to establish the efficacy and reliability of the instrument.

Studies were carried out to develop norms of The Hand Test for various populations in west. Roberts (1971) developed norms for intellectually challenged and bright children at Oklahoma. A study on norm's development was carried out for junior high school American children in the seventh, eighth and ninth grade by Crane (1972). Puthoff (1972) also developed norms for bilingual first, second and third grades children of the Hand Test and the Pea Body Vocabulary Test. There was another study on norms development using the Modified Hand Test and Pictorial study of values to differentiate between successful and unsuccessful educable intellectually challenged work study students (Hardesty, 1973).

Literature review has suggested that the Hand Test emerged as culmination of the projective techniques with well-defined quantitative and qualitative scoring systems. The structure of the Hand Test has been developed in such a way that it differentiates normal population from anxiety related and severe problematic cases like schizophrenia and mood disorders. Certain advancements with diagnostic indices have been formulated for the assessment of personality and other disorders. The Hand Test offers specific scoring system like experience ratio, acting out ratio, pathology score. These scoring procedures can prove instrumental in assessment of various aspects of personality, screening of employees and differential diagnosis of psychiatric disorders. Since no norms have been computed on any type of population in Pakistan. Moreover, norms developed in diverse cultures are not true representative for local population. It is considered viable to develop norms of the Hand Test with indigenous input comprising additional hand patterns which are adapted to have cultural relevance. Normative studies can be possible once you have indigenously developed or adapted version of the tests. The benefits of test adaptation outweighs its disadvantages as development of new tests require extensive resources. Contemplating this gap in existing literature, the present study aimed to adapt The Hand Test in indigenous cultural context which is likely to be effective in differentiating different type of populations like normal population and individuals with schizophrenia and other mood disorders group.

METHOD

The present study is a part of the large cross sectional study which was aimed to adapt, modify, and develop norms of the Modified Hand Test in Pakistani cultural context. The large cross-sectional study comprised of three phases: (i) Translation and adaptation of The Hand Test; (ii) Establishment of psychometric properties of the Modified Test; and (iii) Establishment of Norms.

The present study focused on only the Phase-I which pertains to the translation and adaptation of Modified Hand Test.

Translation and Adaptation of Modified Hand Test

The original Hand Test consisted of 10 stimuli out of which nine consisted of simple unbounded drawings of hands whereas the 10th stimulus is an invitation to subject's imagination that he or she should imagine for another hand. The subject is instructed to respond that "tell the examiner about what it looks like the hand might be doing". The original Hand Test has well established psychometric properties of various types of reliabilities, Test-retest, split -half and inter-scorer as .60, .86, .84 to .92 and .79 to .92 agreement respectively and validity studies of convergent and divergent have also been computed as .27 to .40 and .40 to .64 respectively (Wagner, 1983; Wagner et al., 1981).

In Phase-I, translation of instructions and a pilot study was carried out to adapt new stimuli in following steps:

Step-I: Translation in Urdu of Scoring Booklet of Hand Test

The scoring booklet of Hand Test was translated into Urdu language following forward and back translation methods guidelines offered by Sousa and Rojjanasrirat (2011). Hambleton and Kanjee, (1995) stated that translator should be fully proficient in the both language of interests and familiar with the culture. Hence, it was translated by a panel of bilingual experts which included the Researcher, A student of MS in Clinical Psychology, Subject Specialists of Urdu and English. As afore-mentioned, the standard procedure of translation was followed. Test instructions were translated in Urdu language and then back into its original English language. Followed by the standard translation in Urdu language of instructions has been used to get responses from participants.

Pakistan Journal of Psychology

Step-II: Adaptation of Stimuli for Modified Hand Test and Pilot Study

Ten new stimuli containing indigenous perspective were conceived by the present researcher in consultation with committee of professionals including research and two Assistant Professors of Psychology at University in Lahore.

Followed by a pilot study was carried out for adaptation of four new stimuli which possess the capacity to measure cultural input in addition to encompassing projective techniques traditions on a sample of normal and individuals with schizophrenia and mood disorders diagnosed according to diagnostic criteria given in Diagnostic and Statistical Manual of Mental Disorders (DS-IV-TR) (APA, 1994).

Participants

Cross sectional research design was implied in the study, and purposive sampling technique was used to recruit the participants. The structure of The Hand Test consisting of interpersonal, environmental, maladjustive and withdrawal suggested that four types of population should be recruited as more score on interpersonal and environmental group has proven representation of normal group, more score in maladjustive group is an indication of anxiety related disorders and high score in withdrawal is an indicative of schizophrenia and mood disorders group. The present study mainly focused on normal population and individuals with schizophrenia and mood disorders. Hence, a sample of 100 participants was selected and divided into two groups: 50 normal taken from a local educational residency of Lahore and 50 institutionalized patients with schizophrenia and mood disorders from an in-patient psychiatric hospital of Lahore.

Procedure

The ten new stimuli were administered to a sample of 100 participants. Ten individuals were taken keeping in ratio for one stimulus. Formal permission for data collection was sought from concerned authorities of respective hospital and educational institutions. At the end, participants and concerned authorities were thanked for their time and cooperation.

A group of larger ten stimuli almost similar in structure in each group were selected and out of these ten four stimuli were selected on the basis of their capacity to elicit responses in various categories (already spelled out by its author),

Anjum, Fayyaz & Fayyaz

moreover with varied range of responses. It was observation of the author that these stimuli were already present as non-verbal cues to augment the verbal communication in Pakistani culture. Out of these ten stimuli four were selected and incorporated into The Hand Test at the sequence from nine to thirteen in accordance with agreed terms and conditions with Western psychological services.

Ethical Considerations

Permission was obtained from Western Psychological Services to adapt the Hand Test in accordance with Pakistani cultural context. Written consent of all the participants were taken with the privilege to leave the study at any stage and interested participants were also given feedback on their manifestation of personality with view to improve upon. Confidentiality of the information provided was assured as well.

Statistical Analysis

Frequency count and percentages of participants' responses were computed to select the stimuli on the basis of their capacity to elicit responses in various categories. The Statistical Package for Social Sciences (version 22) was employed for the analysis.

Pakistan Journal of Psychology

RESULTS

Table 1
Summary of Frequency/Percentages of Responses of Normal Group and Individuals with Schizophrenia and Mood Disorder Groups (N=100)

No	Stimulus	AFF	DEP	COM	EXH	DIR	AG	TOTAL	ACT	ACQ	PAS	TOTAL	TEN	CRIP	FEAR	TOTAL	DES	FAILURE	BIZ	TOTAL	GTOTAL
1	2	9	20	0	15	4	50	13	0	0	13	2	4	1	7	29	1	-	30	100	
2	0	3	31	0	27	6	67	11	0	0	11	1	1	0	0	2	16	3	1	21	100
3	24	1	11	0	1	19	56	12	1	0	13	16	0	0	16	12	1	2	15	100	
4	10	2	13	0	1	11	37	26	1	0	27	3	5	1	9	13	9	5	27	100	
5	39	12	5	1	3	4	64	10	0	0	10	0	1	0	1	1	24	1	1	25	100
6	47	4	9	0	3	0	63	11	0	5	16	0	1	0	1	13	4	3	20	100	
7	17	2	16	0	6	1	42	10	0	5	15	0	5	0	5	13	18	7	38	100	
8	9	6	4	5	16	10	50	24	0	1	25	7	1	0	8	9	8	0	19	100	
9	12	37	12	2	13	1	77	8	0	1	9	0	0	0	0	10	3	1	86	100	
10	16	15	14	2	3	12	62	15	1	5	21	0	3	0	3	2	7	5	91	100	
TOTAL	17.6	9.0	14.5	1	9.0	7.0	56.8	14	.3	2.0	16	3.0	2.0	.2	5.0	14.0	5.5	2.5	22	100	

Note. AFF = Affection, DEP = Dependence, COM = Communication, EXH = Exhibition, DIR = Direction, AGG = Aggression, ACT = Action, ACQ = Acquisition, PAS = Passive, TEN = Tension, CRIP = Crippled, DES = Description, BIZ = Bizarre, GTOTAL = Grand Total.

DISCUSSION

The present study aimed at adapting The Hand Test in Pakistani cultural context. The results (Table 1) indicate that overall pattern of score attained by the entire sample are as such: 57% of responses were obtained in interpersonal category which includes affection 18%, communication 15%, direction and aggression 9% each. In environmental category, the overall sample obtained 16% of responses which includes action (14%). In maladjustive category, 5% responses were obtained which includes tension and crippled (2% each.) In withdrawal category, 22% of responses were obtained which includes description 14% and failure 6%.

Four new stimuli were selected out of a group of 10 stimuli based on their ability to give responses in various scoring categories in samples of normal and individuals with schizophrenia and mood disorders, moreover their ranges of eliciting score were varied. *Stimulus group one* consisted of stimulus one and two. Though both the stimuli had almost equal capacity to generate responses in more scoring categories. However, stimulus one generated responses in eleven categories, prominent were communication 20%, direction 15% and action 13%. Thus, stimulus one was selected as it was fulfilling both the criterions of eliciting responses in more scoring categories as well as varied range of responses. *Stimulus group two* consisted of stimulus three, four and five. Stimulus four could elicit responses in more scoring categories that was 13, prominent being action 26%, communication and description 13% each. Thus, stimulus four was selected. *Stimulus group three* consisted of stimulus six and seven. Stimulus seven generated responses in 11 categories, prominent being affection 17%, communication 16% and description 13%. Thus, stimulus seven was selected. *Stimulus group four* consisted of stimulus eight, nine and ten. Stimulus ten generated responses in more scoring categories that is 13, prominent being affection 16%, dependence, action 15% each and communication 14%. Thus, stimulus ten was selected as it was fulfilling the criteria of eliciting responses in more scoring categories and varied range of responses

It was observed by the author that group of these stimuli were present in our culture and people of this region use these hand cues to augment their verbal communication. For instance, stimulus 10 has specific pull for direction and stimulus 13 for dependence. (Anjum & Batool, 2018). Authors have enhanced stimuli of the hand patterns than the original Hand test on different grounds. Previously two efforts have been made to modify the Hand Test. Shinder (1973)

Pakistan Journal of Psychology

increased hand patterns from 10 to 30, 10 each for male, female, and children in a random fashion on the plea to increase reliability of the Hand test. He compared bright versus non-bright delinquents. Lastly Jessica (2010) has enhanced 20 Hand test patterns giving argument that hand patterns should be distinguished on the basis wrinkles, knuckles and nails representing different gender and age would elicit responses in appropriate manner. She has used the Hand Test on the population of sexually abused versus non-abused population.

In conclusion, enhanced patterns of the Hand Test in the present study have added regional perspective, moreover has increased the reliability. The modified version of the Hand test may be enhanced with more stimuli up-to 30 which should contain stimulus constancy for different gender, age and across cultures because enhanced stimuli are likely to increase reliability of an instrument and similarly reflection of diverse culture may become clear in terms of their different scores on different quantitative and qualitative scoring categories. There is also a need to establish norms for age and various populations and input of diverse cultures may also be taken care of. Hence the Hand test is a diagnostic technique, and it has proven its usefulness to discriminate normal population from individuals with schizophrenia and mood disorder population. It is also recommended that the test should be administered in security related organizations for selection of the personnel because it identifies people with acting out tendency and other pathologies like personality and other disorders as well.

REFERENCES

Aiken, L. R. (1997). *Psychological testing and assessment*. Allyn & Bacon.

American Psychiatric Association. (2000). *Diagnostic and Statistical Manual of Mental Disorders* (4th ed., text rev.). Author.

Anastasi, A. (1997). Psychology, psychologists, and psychological testing. *American Psychologist*, 22(4), 297.

Anjum, F. A., & Batool, I. (2017). Test-retest reliability of Modified Hand Test. *Pakistan Journal of Psychology*, 48(1), 39-49.

Anjum, F. A., & Batool, I. (2018). Interscorer reliability of Hand Test. *Pakistan Journal of Social and Clinical Psychology*, 16(1), 47-50.

Anjum, Fayyaz & Fayyaz

Crane, A. J. (1972). *Junior high school Hand-Test norms for American children in the seventh, eighth and ninth grades*. [Unpublished doctoral dissertation, University of Oklahoma].

Hambleton, R. K., & Kanjee, A. (1995). Increasing the validity of cross-cultural assessments: Use of improved methods for test adaptations. *European Journal of Psychological Assessment*, 11, 147-157. <https://doi.org/10.1027/1015-5759.11.3.147>

Hardesty, R. A. (1973). *The use of the Modified Hand Test and pictorial study of the values to differentiate between successful and unsuccessful educable intellectually challenged work-study students* [Unpublished doctoral dissertation, University of Oklahoma].

Jessica, S. A. (2010). *Differences among abused and non-abused younger and older adults as measured by the Hand Test* [Unpublished doctoral dissertation, University of North Texas].

Kline, P. (1986). *A handbook of Test construction: Introduction to psychometric design*. Methuen.

Nisbett, R. E., Peng, K., Choi, I., & Norenzayan, A. (2001). Culture and systems of thought: holistic versus analytic cognition. *Psychological Review*, 108(2), 291.

Piotrowski, Z. (1957). *Perceptanalysis*. New York: Macmillan.

Puthoff, F. T. (1972). *The development of norms for bilingual first-, second-, and third-grade children's responses to the Hand Test and Peabody Picture Vocabulary Test*. [Unpublished doctoral dissertation, University of Oklahoma].

Roberts, B. K. (1971). *Development of norms for intellectually challenged and bright children on the Hand Test*. [Unpublished doctoral dissertation, University of Oklahoma].

Shinder, J. N. (1973). *The development of norms for delinquent and intellectually bright adolescents on a Modified Hand Test*. [Doctoral dissertation, University of Oklahoma].

Pakistan Journal of Psychology

Sousa, V. D., & Rojjanasrirat, W. (2011). Translation, adaptation and validation of instruments or scales for use in cross-cultural health care research: a clear and user-friendly guideline. *Journal of Evaluation in Clinical Practice*, 17(2), 268-274.

Stetson, D., & Wagner, E. E. (1980). A Note on the use of the Hand Test in cross-cultural research: Comparison of Iranian, Chinese and American students. *Journal of Personality Assessment*, 44(6), 603-603.

Wagner, E. E. (1962). *Hand Test: Manual for administration, scoring and interpretation*. Los Angeles: Western Psychological Services.

Wagner, E. E. (1983). *The Hand Test: Manual Revised 1983*. Western Psychological Services.

Wagner, E. E., Maloney, P., & Wilson, D.G. (1981). Split half and Test-retest reliability for pathological samples. *Journal of Clinical Psychology*, 37, 589-592.

Weiten, W. (2007). *Psychology: Themes and variations*. Cengage Learning.

Young, G. R., & Wagner, E. E. (1995). Behavioral specificity in the Rorschach human movement response: A comparison of strippers and models. *Journal of Clinical Psychology*, 49(3), 407-412.