



Validation of the Modified Hand Test with the Human Figure Drawing Test on Personality Traits of Aggression & Anxiety

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Abstract

Present study aims to validate the Modified Hand Test with Human Figure Drawing Test on aggression and anxiety dimensions of the personality. Cross sectional research design was implied. Total of 88 participants (50 males and 50 females) were recruited from a larger sample of 350 participants. Purposive sampling technique was used, written informed consent was obtained from the participants. Both the Hand Test and The Human Figure Drawing Test were administered in a battery of other tests like Thematic Apperception Test, Sentence Completion Test and Word Association Test etc. However, results of The Hand Test and The Human Figure Test were compared on aggression and anxiety dimensions. While computing Pearson product moment correlation results remained significant at .37 and .45 respectively both at .01 of significance. Results of the study are instrumental both for clinicians and researchers for establishing assessment and therapeutic interventions as well as a lead to pursue further researches in validation sphere.

Keywords: Aggression, Anxiety, Hand test

1. Introduction

The Hand test was developed by Wagner (1962), the instrument was developed while following projective techniques tradition and procedure especially of Rorschach (1936) and TAT by Murray and Morgan (1930).

Piotrowski (1936) noted that there was a gap between action tendencies and movement response on Rorschach. The Hand Test like Rorschach and TAT could measure defense mechanism as well as specific response pull.

The Hand test has gained popularity among clinicians and researchers and its format consists of 15 scoring categories which includes Interpersonal which contains Affection, Dependence, Exhibition, Communication, Direction and Aggression Environment containing action, acquisition, and passive, Mal-Adjustive having Tension, Crippled and fear and lastly Withdrawal that contains Description, Fail and Bizarre (Wagner, 1982; Anjum, 2017).

This classification has the capacity to differentiate a person with normal personality profile and person with adjustment problems or severe psychotic features. Along with other diagnostic indices, such as organicity, depression, anxiety, and aggression etc. (Wagner, 1962)

The measure is well known for measuring Aggression. Aggressive pattern of personality as it measures acting out score, which is compiled by computing ratio of interpersonal domains. i.e. Affection, Dependence, Communication versus Direction, Aggression, (Wagner, 1982) The norms criteria is 3: 5 for Acting out Score, Wagner (1982). Work has been carried out in Pakistan as well regarding specificity on the hand test to measure aggressive behavior by Zehra (1996) Difference Between Aggressive and Non-Aggressive Students on Hand Test, Sohail and Mahmood (2004) on The Hand Test: Assessing prototypical attitudes and action tendencies. Comprehensive Handbook of Psychological Assessment Tariq and Ashfaq (1993). A comparison of professional and non-professional criminals on Hand Test scores. The test also carried out domains to measure anxiety related disorders and research work has been carried out on this aspect as well.

The Human figure drawing test is available in many forms like Good enough Harris drawing test (1971), Koppitz (1968), Human Figure Drawing test (1933) valid emotional indicators Harris, Buck, (1966) combined known as expressive technique Bellack & Hersen (1980). Human Figure drawing test is rooted in human unconscious, and while drawing a person which is often projection of the self, does not allow him to fake in either good or bad, rather to reveal his own true self. The features of aggression and anxiety are portrayed on drawing through different ways, e.g., teeth, sharp edges, arms outwards, heavy hands, and sharp nails and more than five fingers etc. (Koptiz, 1968). Koptiz has provided a list of valid emotional indicators. Signs of both aggression and anxiety have been revealed, aggression is revealed through arms out with fist clenched Machover (1949), arms extended from body and over long Machover (1949), claw finger or palm Machover (1949) anxiety is depicted thorough signs of shading on the entire body or part of body or hands (Machover; Levy, 1949) and uneven line pressures (Machover, 1949). It is observation of present author that sometimes both anxiety and aggression are associated with each other and are portrayed on the same part when repentance feelings are projected in the form of shading (anxiety follows manifestation of aggressive symptoms) of body, for instance, sharp nails have been drawn with shading on nails or hands.

The well-known differentiation of the validity implies that validity is supposed to be better or accurate if it gives result about what the test is designed to measure, construct, concurrent, predictive, convergent, and divergent etc. (Aiken, 1997).

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1.1. Validity

Computing reliability is not sufficient, it is mandatory that it should measure the purpose for which it is aimed to measure, however it involves both design and its measurement.

For instance, depression should measure a comprehensive construct of depression, not only the self-esteem or an intelligence test should measure various variable of intelligence and not the scholastic aptitude. (Cook & Campbell 1979). Accepted standard validity and ranges of relatively lower than the reliability (Barker, 2015).

Table 1: Suggested standard for Validity

Criterion	Correlation coefficient
Good	0.50
Acceptable	0.30
Marginal	0.20
Poor	0.10

Construct validity is the most famous type which can be determined through different procedures 1. like correlation of content of the test with behavior judgments, 2. By the expert internal consistency of the test and 3. Through similarities and difference through result of experiment and naturally occurring behavior and lastly by computing correlation of the test with other test on different variables. (Cramer, 1988; Nunnally and Bernstein 1994)

Different population in term of age occupation and experience may obtain different score on different psychological measures.

The aim of the present research is to measure construct validity of aggression and anxiety on both the Hand test and Human Figure drawing test. Construct validity is supposed to compute based on the construct. Construct validity is established by accumulating studies which test predictions about how the construct in question should relate to other constructs and measures. (Cronbach and Meehl, 1955)

Piotrowski (2010) Assumed that construct and concurrent validity are the interest of psychologist for theoretical level where predictive validity based on the result of inference of projective techniques like Rorschach & Thematic Apperception Test is useful in prediction of future behavior of clients and their response toward different therapeutic intervention.

He asserted that validity obtained through other types then predictive or effective validity came out as zero or of low magnitude. (Ainsworth, 1951). Historically The Hand Test scores on Acting out score had been compared by Martin, Blair and Brent (1978) with hostility scores on Rorschach through Elizur's hostility system. Significant relationship was found between these two tests on aggression. The Pearson coefficient correlation was found between .40 to .64 at .01 level of significance. It was concluded that The Hand Test Acting out score is a better predictor of aggression score. A study titled Construct Validity of the Holtzman Inkblot, Anxiety and Hostility Scores by Fehr (1976) was carried out where The Hand test, Ipat Anxiety scale and Holtzman Inkblot test were administered to a sample of 72 college subjects to compare them on anxiety and hostility scores. The Ipat anxiety scores comprised of both overt and covert anxiety. The results of the study on anxiety came out significant on anxiety scale and the Hand Test. However, hostility score did not come significant with Human Figure Drawing test.

1.2. Rationale of the study

It is worth mentioning that both The Hand Test and Human Figure Drawing Test belongs to projective techniques, yet each has its own identification and specifications. The Hand Test which models Thematic Apperception Test & Rorschach is closer to association techniques and is well researched for picking up acting out score (AOS) along with other scoring systems (Experience ratio, Pathology score, Average Initial Score etc.) Moreover, there is a specific domain of Mal-adjusted pattern like tension, crippled and fear that depicts anxiety whereas The Human figure drawing test, is an expressive technique where individuals portrays wide variety of emotional indicators including anxiety and aggression. Literature review has suggested that there are only few studies available whereby aggression has been validated across The Hand Test, Rorschach and Holtzman Inkblot and Anxiety has been validated across The Hand Test and the Ipat Anxiety Scale. No study has been carried which validates these constructs across The Hand Test and The Human Figure Drawing Test. In-spite both, the test contains the constructs and symptomatology of aggression and anxiety. Present study would become fruitful for researchers and clinicians in identifying the degrees and magnitude of these traits which will eventually be instrumental in diagnoses of anxiety disorders and aggression and eventually assist clinicians to set baseline for their assessment, prognosis and therapeutic outcomes and for researchers to compute validation of The Hand Test across other projective and objective personality measures.

1.3. Hypotheses

It was hypothesized that

- There is likely to be a positive relationship between the Hand Test and Human Figure drawing test on anxiety dimensions of personality.
- There is likely to be a positive relationship between the Hand Test and Human Figure Drawing Test on aggression dimension of personality.

2. Method

2.1. Research Design

Cross sectional design has been used in this study and purposive sampling technique was used.

2.2. Sample

A total of 88 participants (44 males and 44 females) were recruited from a larger sample of 350 participants, their ages ranged from 11 to 20 years with mean age of 15. The qualification of the participant's ranged from grade 8th to 12th grade. All participants belonged to different parts of Pakistan as a requirement for development of Norms of Indigenous Norms of the Hand Test for different age groups.

2.3. Measures

Two projective techniques were administered, The Modified Hand test modified version, developed by Anjum and Batool (2018) and Human Figure drawing test scoring procedure were used offered by Kopitz (1966). Emotional indicator on human figure drawing of children. Whereas for The Hand Test scoring procedure offered by Edwin-E Wagner (1983) was used.

2.4. Procedure

Written informed consent was obtained from the participants of the study. They were briefed about the research purpose and their rights as participants. The two tests were administered on each participant, instructions in Urdu were given to the participants. Initially The Hand Test was administered followed by Human Figure Drawing Test in a battery of other personality measures.

3. Results

Table 2: Construct Validity of the Modified Hand Test and Human Figure Drawing on main domains of Aggression and Anxiety (N=88)

Pearson Correlation coefficients	Correlation coefficients	p-value
Aggression	.37**	0.01
Anxiety	.45**	0.01

The Pearson correlation analysis indicates that there is a significant relationship between the two measures i.e. The Hand Test and Human figure drawing test on the domain of aggression at 0.01 level which remained as .37 whereas for the dimension of anxiety it is has been found as significant at 0.01 level and remained as .45. It was also found that 5% of the sample manifested both aggression and anxiety symptoms on The Hand Test as well as Human Figure Drawing Test.

4. Discussion

Results of the present study are in-line with the previous study and confirm our hypotheses one, study conducted on Hostility dimension of the personality by Martin, Blair and Brent (1978) with hostility scores on Rorschach through Elizur's hostility system. However, the Pearson product moment correlation computed was .40 to .64 at .01 level, in this study the Pearson correlation has been computed as .37 at .01 level of significance. The results have been almost similar in both the studies. Similarly, the results of the present study also confirm the results of previous study on the anxiety dimension of personality carried out on Construct Validity of the Holtzman Inkblot, Anxiety and Hostility Scores by Fehr (1976) whereby manifest hostility score on Holtzman Inkblot test did not come out significant with The Hand Test acting out score which is an overt expression of aggression. However, the relationship was found significant between anxiety score on both the measures. The relationship of anxiety dimension of personality came out as .45 between The Hand Test and The Human Figure Drawing Test at .01 level of significance. The relationship of both aggression and anxiety on the both measures are considered as fairly acceptable range as spelled out by Barker (2015). In addition to, there were samples who portrayed aggression and anxiety score on the protocols of same individuals. Such were the individuals who for instance got score on aggression, on stimulus six which contains primary pull for aggression (Wagner, 1983; Anjum & Batool, 2017) followed by response of compensatory behavior on stimulus seven on The Hand Test and shading on sharp nails and fingers on the Human Figure Drawing Test. It is also observation of the present author that the sample was though of heterogeneous nature but economically belonged middle class background. This might have effect on manifestation of score on both the traits simultaneously. It may have un-explored cultural implications because after manifestation of aggression, people with developed conscience may express anxious behavior.

4.1. Limitation

Though The Human Figure Drawing Test has been researched on wide variety of topics consisting of personality traits yet, it has not evolved a proper scoring system except for some scoring criterion as reflected as emotional indicators by Koppitz (1966). Different researches outcomes validates results and can be taken as evidence to confirm or rectify. However, still need exists to develop a proper scoring system for The Human Figure Drawing Tests on different dimensions of personality.

4.2. Recommendation

Validation of The Hand Test on different dimensions of personality as per its format i.e. Interpersonal, Environment, Mal-Adjustive and Withdrawal may also be made with other objective measures which contains similar constructs for instance big five comprising of conscientiousness, agreeableness, neuroticism and extraversion etc. More researches are recommended on heterogenous sample in terms of demographic variables like age and qualification etc. Similarly, validation studies may also be conducted on a relatively larger sample.

References

Agreement, I. (2004). The Hand Test: Assessing prototypical attitudes and action tendencies. *Comprehensive Handbook of Psychological Assessment, Volume 2: Personality Assessment*, 2, 405.

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

Ainsworth, M. D. (1951). Some problems of validation of projective techniques. *British Journal of Medical Psychology*.

Anjum, F. A., & Batool, I. (2017). Test-Retest Reliability of Modified Hand Test. *Pakistan Journal of Psychology*, 48(1).

Barker, C., Pistrang, N., & Elliott, R. (2015). Research methods in clinical psychology: An introduction for students and practitioners. John Wiley & Sons.

Bellack, A. S., & Hersen, M. (1980). *Introduction to clinical psychology*. Oxford University

Buck, J. N. (1966). The house-tree-person technique: Revised manual. Western Psychological

Campbell, D. T., & Cook, T. D. (1979). Quasi-experimentation. Chicago, IL: Rand Mc-Nally.

Cramer, P., Blatt, S. J., & Ford, R. Q. (1988). Defense mechanisms in the anaclitic and introjective personality configuration. *Journal of Consulting and Clinical Psychology*, 56(4), 610.

Cronbach, L. J., & Meehl, P. E. (1955). Construct validity in psychological tests. *Psychological bulletin*, 52(4), 281.

Fehr, L. A. (1976). Construct validity of the Holtzman Inkblot anxiety and hostility scores. *Journal of Personality Assessment*, 40(5), 483-486.

Hertz, M. R. (1936). The method of administration of the Rorschach ink-blot test. *Child Development*, 237-254.

Koppitz, E. M. (1966). Emotional indicators on human figure drawings of children: a validation study. *Journal of Clinical Psychology*.

Machover, K. (1949). Personality projection in the drawing of the human figure: A method of personality investigation.

Martin, J. D., Blair, G. E., & Brent, D. (1978). The relationship of scores on Elizur's hostility system on the Rorschach to the acting-out score on the Hand Test. *Educational and Psychological Measurement*, 38(2), 587-591.

Menninger, W. C. Machover, Karen. Personality projection in the drawing of the human figure. Spring-field, 111.: Charles C. Thomas, 1949. Pp. ix+ 181. \$3.50. Because of the simplicity of its administration.

Piotrowski, C. (2015). Projective techniques usage worldwide: A review of applied settings 1995-2015. *Journal of the Indian Academy of Applied Psychology*, 41(3), 9-19.

Press.

Services.

Tariq, P. N., & Ashfaq, S. (1993). A comparison of criminals and non-criminals on Hand Test scores. *British journal of projective psychology*.

Zehra, F. (1996). Differences between Aggressive and Non Aggressive Students on Hand Test. *Pakistan Journal of Psychology*, 27(1), 21.