

A Comparative Study of Stimulus Pull of Modified Hand Test

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ABSTRACT

In qualitative analysis of Hand Test expected stimulus pull had been identified by Edwin E Wagner in 1983, the author of Hand test based on responses obtained by participants. The study based on American sample of 1020 participants included normal adults, air force pilots, college students, student nurses, high school students, children, schizophrenics, patients with organicity, organic psychosis, neurotics, depressed patients, mental retards, male pay roles, male prisoners, female prisoners and delinquents. In line with the previous study, the present study was carried out on 500 participants whose age ranges from 10 to 80 years with mean age 34.46 and SD (17.37). These participants were further bifurcated into 350 normal, 50 with adjustment problems, 50 neurotic participants with anxiety related disorders, obsessive compulsive and phobic disorders and 50 psychotic participants diagnosed by psychologist/clinical psychologists. Data was collected as per standardized procedures and scored according to the scoring categories offered by its author. Most of the stimulus pull have been in the same direction as suggested by its author e.g. Stimulus no1, 2, 3, 4 6, 7, 8 and 10. Certain differences and variations were also noted which are perhaps due to cultural variation, exhibition and acquisition responses have lesser frequency count. Additional four stimuli were added in accordance with traditional procedure of test construction and their pull have also been suggested after frequency count and percentages.

KEYWORDS: Interpersonal, Environmental, Maladjustive, Withdrawal

INTRODUCTION

Hand test is a projective and diagnostic technique developed by Edwin E Wagner in 1962 and later norms for children and adolescents were also developed in 1983. The study based on American sample of 1020 participants included normal adults, air force pilots, college students, student nurses, high school students, children, schizophrenics, patients with organicity, organic psychosis, neurotics, depressed patients, mental retards, male parolees, male prisoners, female prisoners and delinquents in its 3rd revision study was conducted on 1688 participants which included imbeciles morons, three separate groups of normal children, technical high school boys, dyslexic children, three groups of delinquents and technicians, students, junior high school, neurological handicapped and entire police department and the author claimed that the test was based on best representative norms from all over the world. The test consists of 10 stimuli which portray simple drawing of hands and the subjects are instructed to tell what these hands looked like to perform an activity. Whereas the 10th stimulus is blank and is an invitation to imagination. In the modified version of Hand Test four new stimuli were added to have cultural input, as these hand cues are often used by population of Pakistan either in non-verbal communication or to support for verbal interaction. These Four stimulus were carefully selected by a panel of committee of professionals that to first by collecting data of 100 participants i.e. 50 normal and 50 abnormal on a total of 10 stimuli based on their capacity to elicit responses in more number of quantitative scoring categories already spelled out [8]. [4] advocates for the development of new projective techniques on the plea firstly it should have specific pull (area of measurement). Secondly it should measure defense mechanism. Thirdly it should have a relative structure so that a subject has some support to respond according to his perception about the stimulus. Instead of total unstructured and ambiguous stimulus. [1] claimed that no single test is entirely a culture free and it gives some advantage to its inhabitants because the content constancy of stimulus is perceived differently by people belonging to different cultures and the meaning they attached to stimuli, any stimuli during the process of development of a test, it may be an attempt by its originator to cover responses of wide range of that population but not of people belonging to other cultures. This phenomenon was also observed by the present author while collecting data on modified version of Hand Test. The same content is perceived entirely differently by people of different ages, professions and cultural

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backgrounds. Difference of exposure and experience also have effect while giving response to different stimuli, difference was also noted in response of persons belonging to sub cultures. Only few studies have been carried out on the issue of stimulus pull previously. The first study was done by the author Wagner himself [8] and he suggested different stimulus based responses of participants, for example; stimulus four was identified as father percept, stimulus six prominent pull is associated with aggression and stimulus nine for psychosexual orientation.[2] had suggested themes for various stimulus of Thematic Apperception Test for instance stimulus one possess the theme for self-construct conflicts with authority and sexual behavior, 7BM have three parts, father son relations and derivatives and 8BM contains theme for aggression conflicts with authority and health related issues for need achievement. [5] had also commented and gave importance for the stimulus constancy (The ability to evoke responses in the specific area). Pakistani and American sample was compared based on different themes in stimulus, similarities and differences were found in the need of participants belonging to different cultures. For instance; the United States sample was low on need for dependence and high on assertiveness and aggression as compared to Pakistan sample. The second study on stimulus pull was conducted in 1969[7] but was done in comparison of individual versus group administration and their ability to elicit responses in terms of stimulus pull and it was concluded that there was little difference found in two types of administration.

Statement of Problem

The study was required to find similarities and differences in responses on stimuli already devised by Edwin E Wagner, the original author of Hand Test as well as additional stimuli developed by the present author on sample belonging to different cultures.

Justification of Research

Since little literature was available about stimulus pull (constancy), the ability to evoke responses in specific dimensions among various variables of Hand Test. It was considered viable to contribute in the area where literature was almost silent except first study done by its author and one off was carried out by [7]. Moreover, it was considered that the present study would be instrumental in determining specific personality aspects of different cultures.

Significant of the Study

The present study conducted about determining stimuli pull after a gap of more than 30 years is likely to instigate other researchers to carry out research on this aspect, on sample belonging to other cultures with original as well as Modified Hand Test.

METHODOLOGY

Sample

The sample of this study consisted of 500 participants which is further bifurcated into four major groups i.e. normal which were 350 with equal proportion of males and females, their age ranging from 10 to 80 years with the mean age of 37.01 and (SD) 18.6. The second group consisted of 50 participants i.e. 42 males and 8 females their age ranging 11 to 46 years with mean age of 20.43 and SD (10.8), these participants had adjustment problems at home as well as educational institutions and at educational institutions as reported by their teachers and administrative staff. The third group consisted of neurotic/anxiety related disorder participants and had three sub groups in it with almost equal number of males and females, in neurotic/ anxiety related disorders their age ranging from 16 to 37 with mean age 34 and SD (9), in neurotic Obsessive Compulsive Disorder, their age ranged from 23 to 30 years with mean age as 36 and SD (9), in neurotic fear their age ranged from 11 to 45 years mean age as 28 and SD (12). They were diagnosed patients of anxiety disorder, obsessive compulsive disorder, phobic and panic disorder. The fourth group consisted of 50 psychotic patients with almost equal number of males and females and were diagnosed patients of schizophrenia age ranging from 16 to 57 years with mean age as 31 and SD (11), bipolar age ranging from 21 to 56 years old with mean age as 35 and SD (10) and depression age ranging from 15 to 54 years with mean age as 30 and SD (10), they all were diagnosed by Psychiatrists and Clinical Psychologists. Positive and Negative Symptom scale[3] was also administered but only as a screening tool.

Instrument

The original hand test was developed by [8]. Later, it was revised in 1983. Couple of efforts have already been made to enhance the stimulus of Hand test previously with the plea to enhance its reliability [4] and to make it more appropriate with children, women and elderly people with reference to abuse. [6]Modified Hand Test with additional four stimuli and total of 14 stimuli was administered in individual setting, participants were instructed to tell what these hands look like to perform an activity, and the last 14th stimulus is blank and an invitation to

imagination. The participant's verbatim was recorded. Subject's responses are scored across fifteen scoring categories which comes under major four domains as under.

Interpersonal

This domain of personality has six sub categories which includes affection (to exchange love and support), dependence (to seek support and help from others), communication (to tell someone about something, to give understanding to someone) These three sub categories are considered as socially desirable traits. [8] whereas direction (directing others to do what is being ordered or required in a way to influence others to obey one's command) and aggression (to inflict, insult or an injury) these two are considered as socially undesirable traits. Acting out ratio which is specific for this test and is famous amongst clinicians and researchers. The fifth category is exhibition where the stimulus is perceived as showing narcissistic attitude. About 60 % responses in interpersonal main category but in scattered fashion is an indication of normal protocol.

Environmental

It consists of action (stimulus is perceived as to perform an activity, acquisition (the stimulus is perceived in the process of trying and the task has not yet been completed and passive (denoting fall of psychic energy). About 40 percent responses in this category are an indication of normal protocol and both interpersonal and environmental categories constitute 80 to 90 percent responses of a normal individual [8].

Maladjustive

It comprises of tension (feels and express pressure e.g. holding a thing tightly), crippled (it is represented by an injury to one's own hand/ fingers) and fear (indicating avoidance because danger is ahead, these are typical of neurotic protocol.

Withdrawal

This constitutes of description (instead of performing an activity, it is just to describe a response comes in the form of description of the position of the hand), fail (people fail to give any response, it is an indication of shock or difficulty in area which is taped by the stimulus pull) and bizarre (stimulus is perceived indicating less contact with reality and typical of psychotic population)

Procedure

The instrument was administered individually in accordance with standardized procedures but in Urdu as per agreement with Western Psychological Services. The scoring booklet was translated into Urdu by a panel of experts. Only psychotic subjects were offered with the example of Hand shake to take advantage of testing the limits procedure [9] and prompt was also offered only in the beginning but was not followed later. After an interval of 100 seconds the new stimulus was presented, and no response was scored as fail. Percentages were computed after frequency count against each stimulus with reference to quantitative scoring categories along with their qualitative analysis as mentioned in revised manual, 1983.

RESULTS

The comparison of stimulus pull is being carried out by comparing stimulus pull suggested by its author Wagner [8] in the form of qualitative analysis with frequency count and percentages. The result of present study is appended below.

Table 1

Shows percentages of responses according to quantitative scoring categories and an indication of stimulus pull based on 500 sample of Pakistani Participants.

Stimulus no	Aff %	Dep%	Com%	Exb%	Dir%	Agg %	Act%	Acq%	Pas%	Ten%	Crip%	Fear%	Des%	Fail%	Biz%
1	23.9	9.89	9.20	0.00	23.40	19.96	9.20	0.34	.17	0.00	1.04	0.52	1.90	1.04	0.86
2	2.25	2.25	9.36	0.94	14.79	13.30	34.46	4.31	1.87	2.06	3.18	1.12	7.12	2.43	.56
3	0.94	0.56	59.06	0.19	23.4	5.47	7.36	0.00	0.19	0.19	0.38	0.57	1.13	0.00	0.57
4	56.30	1.88	6.69	0.19	6.78	3.58	14.68	1.13	1.51	0.19	1.51	0.56	3.20	0.75	0.75
5	9.68	2.05	4.28	2.61	5.26	0.56	18.81	1.49	12.29	1.31	23.46	0.19	7.45	6.52	2.23
6	8.77	0.53	5.79	0.18	2.28	49.82	11.05	0.72	0.72	16.49	1.23	0.00	1.58	0.18	0.72
7	38.61	8.47	8.47	1.13	6.78	2.64	19.02	0.00	5.65	1.32	0.94	0.38	4.14	1.69	0.79
8	9.62	1.13	3.21	0.18	1.26	2.34	69.62	3.24	0.72	1.80	1.08	0.00	2.88	1.8	0.36
9	3.38	4.14	8.65	0.38	3.20	2.44	3.20	1.88	2.63	2.44	11.09	0.56	10.34	10.15	1.13
10	4.32	3.78	30.81	0.54	16.04	5.05	17.84	0.18	0.18	7.75	1.08	0.00	8.08	.3.78	0.36
11	17.14	0.38	8.57	0.38	3.05	9.33	37.90	0.38	1.33	8.19	2.48	0.38	0.57	4.95	0.95
12	64.17	1.14	10.15	0.00	0.38	1.34	12.26	0.19	0.57	1.90	0.57	0.00	4.21	1.72	1.34
13	3.19	62.78	2.26	1.88	0.93	20.68	0.75	0.92	0.18	1.13	0.00	3.10	0.09	1.30	0.00
14	22.70	9.34	6.85	1.17	3.72	6.46	22.31	0.39	0.98	1.17	0.39	0.00	5.87	0.18	0.59

Note: Aff=Affection, Dep= Dependence, Com= Communication, Exb= Exhibition, Dir= Direction, Agg= Aggression, Act= Action, Acq= Acquisition, Pas= Passive, Ten= Tension, Crip= Crippled, Des= Description and Biz= Bizarre

DISCUSSION

The comparison of stimulus pull was offered by Edwin E Wagner based on frequency count and percentages computed on five hundred sample suggested quite interesting results. Stimulus wise comparison is appended below.

1. Stimulus number one the pull suggested earlier was of affection, direction and communication, whereas in the present context these are found as affection 23.9 %, direction 23.4 % followed by aggression 12 %, communication is only 10 %. This is an indication that this sample is relatively more aggressive as compared to their American counterparts who have better communication skills, on the average same pattern is observed in terms of stimulus pull.
2. Stimulus number two pull had been suggested for action and acquisition scoring categories, probability of any neurotic shock was also expected on this stimulus. The same has been identified in the result of present study as the leading response scoring categories remained as action 34 % followed by direction 15 % and aggression 13 %, however very few percentage i.e. 4 % was computed on acquisition category.
3. Stimulus number three the pull suggested earlier for in the hierarchy of communication, direction and action. It is interesting to note that the same pattern has been emerged in the present study and the leading scoring category remained as communication 31 %, direction 23 % and action 7 % respectively.
4. Stimulus number four no strong pull was suggested by its author and is an indication of masculine and percept of father. It is to point out that majority of present sample has achieved with leading responses in affection 56% followed by action 14.68 and communication and direction both with 7 %. Higher percentage in affection category indicates the percept of father perception and positive relationship with authority and father figure.
5. Stimulus number five the pull had been suggested for environmental and that too for passivity. In the present context the leading scoring category remained as crippled 23.46, action 19 and passive 12%, somewhat different results have been observed, however the third leading category remained the same as was suggested earlier. Pull suggested for environmental category has been validated.
6. Stimulus number six the suggested pull is for aggression and action responses where as in the present context it remained the same with leading being aggression 50%, tension 16 % and action 11 %. It is to highlight that tension responses also have the connotation of aggression because it was observed that a sort of effort to control the expression of aggression was projected in the form of tension responses.
7. Stimulus number seven no pull had been suggested and it is expected that any response would be a reaction of the strong pull of aggression percept in stimulus no 6, the same has been observed in the present context as leading scoring category on this stimulus remained as affection 39 %, followed by action 19% and communication and dependence both with 8%. The leading affection response is an indication of reaction and recomposing offered by participants.
8. Stimulus number 8 the pull has been suggested towards action moreover it was commented that it is an easy stimulus and the same pattern of responses have been observed as leading scoring categories remained as action 70 % followed by affection 10% and acquisition and communication both with 3 %. This is perhaps the only stimulus where acquisition responses come in somewhat reasonable proportion.
9. Stimulus number nine it was suggested that it is a difficult stimulus and implication for psychosexual area the same pattern have been observed where the leading scoring categories remained as action 37%, crippled 11 % and description and fail both with 10 % and 10 % respectively. Description is a kind of response where participants just describe the stimulus instead of giving a proper response. Hence fail and description provided an evidence for avoidance and psycho-sexual conflicts, if both combined it becomes the second leading category and is an indication of difficult stimulus and the same has also been suggested.
10. Stimulus number ten it had been suggested the most difficult one and responses predict the future goals of the individual, in the present context the leading scoring category remained as affection 23%, action 22 followed by fail with 18%. The result is in line with the prediction of the author of Hand Test because in the present study it emerged as most difficult stimulus to perceive. Moreover, it also indicates about the behavioral pattern of participants of Pakistan as the last activity is expected to be undone. It is to be noted in the present study stimulus no 14 is considered as stimulus no 10

Suggested Stimulus Pull for addition four stimulus

11. The suggested pull for stimulus no 11 are communication with 30.8 % followed by action 17.84 % and direction 16.04%
12. Suggested pull is action 37.9 % followed by affection 17.14% and aggression 9.33%.

13. Suggested pull is affection 64.17%, followed by action 12.26 and communication with 10.15 %.
14. Strong pull for dependence with 62.78 % followed by action with 20.68% and affection 3.19 %

Limitation and Recommendations

Only few researches have been carried out about Hand Test on this aspect of stimuli pull where as the present study is the first of its kind on Modified Hand Test. However, researches on stimulus pull have been carried out on other projective techniques like Thematic Apperception Test and Rorschach. Researches are encouraged to conduct studies to determine stimuli pull and specific aspects of personality on variety of samples (heterogenous and homogenous) as well as its validation with other personality tests.

Conclusion

Almost all the stimuli pull suggested earlier by Edwin E Wagner in 1962-1983 have been confirmed and validated. It is also an indication of soundness of the measure of hand test across different samples with diverse cultures, it is suggested that the new pull suggested/expected for addition stimulus may be validated in future studies.

REFERENCES

- [1] Anastasi, A. (1997). Psychology, psychologists, and psychological testing. *American Psychologist*, 22(4), 297.
- [2] Bellak, L., & Bellak, S. S. (1949). *Children's Apperception Test*. Larchmont, NY: CPS
- [3] Kay, S. R., Flszbein, A., & Opfer, L. A. (1987). The positive and negative syndrome scale (PANSS) for schizophrenia. *Schizophrenia bulletin*, 13(2), 261.
- [4] Hardesty, R. A. (1973). The use of the Modified Hand Test and pictorial study of the values to differentiate between successful and unsuccessful educable mentally retarded work-study students (Unpublished Doctoral dissertation). The University of Oklahoma.
- [5] Kline, P. (1986). *A handbook of test construction: Introduction to psychometric design*. Methuen.
- [6] Raees, S. (1993). Norming of the Thematic Apperception Test in Pakistan (Doctoral dissertation, University of Karachi, Karachi).
- [7] Sergio, Jessica A. "Differences among abused and non-abused younger and older adults as measured by the Hand Test." PhD diss., University of North Texas, 2010.
- [8] Taylor, J. F. (1969). Group Administration of the Hand Test: Effects on Stimulus Pull and Responses. *Journal of Projective Techniques and Personality Assessment*, 33(3), 243-246.
- [9] Wagner, E. E. (1962). *The Hand Test: Manual for administration, scoring, and interpretation*. Mark James Company.
- [10] Wechsler, D. (1981). *WAIS-R manual: Wechsler adult intelligence scale-revised*. Psychological Corporation.