

## PROJECTIVE TESTS IN PSYCHIATRIC DISORDERS

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### ABSTRACT

Projective techniques have a long and rich history. The Rorschach has the dubious distinction of being simultaneously the most cherished and the most criticized of all psychological assessment tools. The test consisting of 10 symmetrical, ambiguous inkblots was developed by Swiss psychiatrist Hermann Rorschach in 1921. Constructional technique such as Thematic apperception test, completion technique such as sentence completion test and expressive technique such as Draw a person test are also useful test in various psychiatric disorder. The applicability of the projective tests have widened in recent years keeping pace with the fast changing scenario of clinical psychology.

**Key words- Rorschach, Thematic Apperception Test, Draw a Person Test.**

### INTRODUCTION

Projective techniques have a long and rich history. Among many William Shakespeare wrote about the projective qualities of clouds, while William Stern used clouds as test stimuli before Rorschach and his ink blots. Francis Galton in 1878 suggested Word Association method and Kraepelin made use of them, while Binet and Henri in 1896, the founders of modern intelligence testing used ink blots in the study of visual imagination. (Aronow et al, 2001). However, the real impetus for projective techniques started with Hermann Rorschach's classic 1921 monograph 'Psycho-diagnostics' in which he described the use of inkblots as a method for the differential diagnosis of psychopathology (Aronow et al, 2001).

The term 'Projective Test' was however, first popularized by L.K. Frank in 1939 who considered them to be psychological "X-rays" that yielded fleeting glimpses into otherwise unobservable mental processes (Trull and Phares, 2001).

For decades projective tests have been an integral part in the assessment of personality. Projective techniques are distinguished from other methods of assessment by the use of unstructured tasks and ambiguous materials (Guilford, 1959).

The rationale underlying projective tests is 'Projective Hypothesis': 'when interpreting ambiguous stimuli subjects interpret or structure it in his own way, thus evoking personality characteristics that are unique in his own way' (Sundberg; 1977).

Lindzey (1961) has tried to give a comprehensive definition of projective techniques:

"A projective technique is an instrument that is considered especially sensitive to covert or unconscious aspects of behavior, it permits or encourages a wide variety of subject responses, is highly multidimensional and it evokes unusually rich or profuse response data with a minimum of subject awareness concerning the purpose of the test and there are no correct or incorrect responses".

Lindzey (1961) has divided projective techniques into five types depending on the type of task involved.

*Association techniques* ask the subject to tell what is suggested by a verbal, visual or auditory stimulus, e.g., Word association Test, Rorschach.

*Construction techniques* involve creating of an imaginal production for which test materials provide a framework; e.g., TAT, Make – A - Picture story.

*Completion techniques* require the subject to complete a statement or story. e.g., Sentence Completion Tests, Rosenzweig Picture Frustration Study.

*Choice or Ordering techniques*: Involve arranging materials in story-telling sequences, after which no verbal elaboration is required, e.g., Tomkins – Horn Picture Arrangement Test, Szondi Test.

*Expressive techniques* require the subject to perform an artistic or creative act; they do not depend on test stimuli, e.g., Draw- A – Person Test, Finger Painting.

### BRIEF DESCRIPTION OF COMMONLY USED PROJECTIVE TESTS

#### Association techniques

##### **Rorschach:**

The Rorschach has the dubious distinction of being simultaneously the most cherished and the most criticized of all psychological assessment tools. Till date on one hand it is held in great esteem by many for its ability to access intrapsychic material, whereas others consider it to be a prime example of unscientific psychological assessment (Hunsley and Bailey; 1999). The test consisting of 10 symmetrical, ambiguous inkblots was developed by Swiss psychiatrist Hermann Rorschach in 1921. Half of the inkblots are

achromatic and the remaining is chromatic. The test requires the subject to report what he sees and what the inkblot looks like to him. The scoring systems revolve around the location of the blot in which the percept was seen (example: whole, detail etc); the qualitative aspects of the perception (called determinants) which include shape, color, shading etc and content of what was perceived (animals, human anatomy etc). Six different scoring and interpretation systems for the Rorschach test are available that includes the scoring systems given by Samuel Beck, Ralph and Maugeurite Hertz, Zygmunt, Piotrowski, Bruno Klopfer, David Rapaport and John Exner.

#### **Holtzman Inkblot Technique:**

The Holtzman Technique provides two parallel series of 45 cards each. Only one response per card is obtained. Both achromatic and colored cards are included; a few inkblots are markedly asymmetric. A short version consisting of 25 cards has been proposed by Holtzman and is in the process of being normed (Swartz; 1992)

#### **Construction Technique**

#### **Thematic Apperception Test (TAT):**

The Thematic Apperception Test was developed by Henry Murray and his coworker Christiana Morgan in 1935. The TAT consists of 31 achromatic pictures (one card is a blank card), typically showing individuals of both sexes and of different age groups who are involved in a variety of activities. The test requires the subject to tell a story for each card. Many different scoring and interpretation schemes are available for TAT which includes among many Murray's need - press system, and Bellak's main theme technique. TAT contains cards which are useful for boys and men, some for girls and women and some for both genders. Various adaptations of TAT exist including Indian adaptation by Uma Chowdhury.

#### **Completion Techniques**

#### **The Sentence Completion Test:**

The sentence completion method of projective testing encompasses a wide variety of tests, all of which share a common format. In each instance, individuals being studied by this method are required to complete a number of sentence stems which are presented to them. Test usage surveys consistently find that sentence completion tests are the most popular personality instruments used by practitioners (Holaday et al., 2000).

#### **Rosenzweig Picture Frustration Study:**

It presents a series of cartoons in which one person frustrates another or calls attention to the frustrating conditions. The instrument is available in separate forms for adults aged 14 and over, for adolescents aged 12-18, and for children 4-13. Responses on the tests are classified with reference to type and direction of aggression. Types of aggression include obstacle dominance, ego defense and need persistence. Direction of aggression is scored as extraaggressive, intraggressive and imaggressive (Anastasi and Urbina, 1997).

#### **Expressive Techniques**

#### **The Draw A Person Test (DAPT):**

Machover's Draw A Person Test (Machover, 1949), requires a person to 'draw a person'. It is believed that this technique can be used projectively to assess especially those aspects of psychodynamic involved with the self image and with the body images. The interpretation of DAPT is essentially qualitative where a particular 'body sign' is associated with certain personality characteristics.

#### **CURRENT STATUS OF PROJECTIVE TESTS**

The birth of various projective techniques in the first half of the twentieth century is viewed as stemming from dissatisfaction with paper and pencil tests, which were perceived as dealing with the conscious or superficial aspects of personality. The golden era of projective tests was in the fourth and fifth decades of the twentieth century when it had widespread use and popularity.

However, over the past several decades, since 1960's projective tests became targets of increasing criticism (Aiken, 1996). The basic assumption of projective tests of reflecting significant and enduring personality attributes have been questioned. Several experimental studies have demonstrated the effect of factors like temporary states (e.g. hunger, anxiety, frustration) of the examinee, differences in instructions examiner characteristics, respondent's perception of the testing situation, examiner's verbal ability to influence projective test responses (Anastasi and Urbina; 1997).

## EMPHASIS ON EMPIRICISM

Critics have argued that projective tests cannot be a 'test' as it doesn't adequately fulfill the psychometric properties of reliability, validity or norms. It has been pointed out that the final interpretation probably 'projects' personal idiosyncrasies of the examiner than the examinee's personality (Anastasi and Urbina; 1997). Rising to the persistent criticism pertaining to lack of psychometric properties in projective tests, attempts have been made to standardize many of the tests. The following are the major developments made in some of the commonly used tests:

- **Rorschach**

Rorschach himself however did not conceive his work as a 'projective test' per se. Instead he thought of it as an investigation in perception that would help in the differentiation of Schizophrenia. He chose to call his method a 'Form Interpretation Test' and stressed the importance of greater empirical validation of his method. But due to his untimely death in 1922, not much progress was made.

After his death Rorschach's colleagues continued to use his method but their focus was on clinical and vocational applications of the method. None tried to follow a systematic empirical approach stressed by Rorschach. In fact during a period of slightly more than 20 years (1936-1957), five Rorschach systems developed, though far away from his birthplace in America with their unique scoring and approach to interpretation (Exner, 1969).

The five differed in their emphasis on empirical investigation and phenomenological / psychoanalytic approach. Among them Samuel Beck, Ralph and Maugeurite Hertz, and Zygmunt Piotrowski had more of empirical orientations, while Bruno Klopfer and David Rapaport had phenomenological orientations.

Thus critics highlighted this lack of agreement among the Rorschach followers themselves and expressed doubt regarding the reliability and validity of the test results. Moreover, the differences in the scoring approach created problems in interpreting the test results of different research studies and in generalizing from one study to another.

In 1974, John Exner developed the 'Comprehensive System' by incorporating elements that had empirical support from the five different systems. He tried to provide a systematic method of scoring and interpreting data and he attempted to combat, one of the most discussed criticisms of Rorschach, pertaining to the lack of psychometric properties.

Over the years, various editions documenting the Comprehensive System have included the following (Hunsley and Bailey; 1999):

- a) Detailed rules for administration, inquiry, scoring and interpretation.
- b) Evidence of reliability and validity for many scales and summary scores and
- c) Normative data for clinical and non-clinical samples.

### **Reliability**

Among all available scoring systems, scales central to Comprehensive System by Exner have been shown to have adequate reliability (Hunsley and Bailey; 1999).

Studies of inter-rater agreement indicate that the variables coded in the comprehensive system can be reliably scored. The levels of agreement typically found exceed 90% for location scores, pairs, popular and Z-scores; are somewhat lower for form quality and content categories and middle or lower 80's for determinants and special scores (Exner, 1993).

However, significant concern remains on method by which interrater reliability is typically calculated in Rorschach research. The following two issues are relevant: the nature of the response base (i.e., the total Rorschach protocol or individual responses to each card) and desirability for adjusting chance agreement (Hunsley and Bailey; 1999).

### **Validity**

The first statistically sound meta-analytic review was done by Parker et al (1988), suggested that some Rorschach indexes can possess moderate validity by usual psychometric standards and it is comparable to MMPI in this respect. However, recent reanalysis of the above data by Garb et al (1998) revealed that the typical validity of Rorschach was significantly lower than that of the MMPI.

- **The Holtzman Inkblot Technique**

Even before Exner's work on 'Comprehensive System', a serious effort to apply a psychometric orientation to the inkblot technique was undertaken by Wayne H Holtzman.

This technique provides two parallel-series of 45 cards each that permits not only the measurement of retest reliability but also helpful in follow-up studies. Administration and scoring are also well standardized. Scores are obtained in 22 response variables. For

- **The Thematic Apperception Test (TAT)**

A fair amount of normative information has been published regarding the most frequent response characteristics for each card, including the way each card is perceived, the themes developed, the roles ascribed to the character, emotional tones expressed, speed of responses, length of stories and the like. A number of quantitative scoring schemes have also been developed that yield good scorer reliability (Aronow et al, 2001). However, these normative data provide only a general framework for interpreting individual responses and most clinicians still rely heavily on subjective norms built upon their own experiences. Such a trend coupled with the fact that different clinicians administer different sets of cards makes generalisability of different TAT research findings questionable. The lack of uniformity among clinicians has also made it very difficult to investigate the psychometric properties of the TAT as a distinct psychological test (Anastasi and Urbina, 1987). In fact TAT has been called “a clinician’s delight and statistician’s nightmare” (Lilienfeld et al; 2001).

- **The Apperceptive Personality Test (APT)** (Holmstrom et al 1990)

It is a relatively new projective story technique that has tried to improve upon the shortcomings of TAT. It was developed for use with adolescence and adult subjects of any racial background. In contrast to TAT, APT has a definite set of cards (8 cards) that is administered to all subjects. Extensive norms are available. Due to its single standard scoring procedures, it is more objective and test results are easily comparable. The male and female characters in the cards are of the different age and ethnicities, facilitating cross cultural research.

- **Sentence Completion Tests**

In the earlier sentence completion tests like Tendler Sentence Completion test (Tendler, 1930); the scoring procedures are based on the projective hypothesis and primary clinical judgment. No information is given on the reliability and validity. On the other hand later developed tests like The Rotter Incomplete Sentences Blank, which is also the most frequently used test now (Holladay et al, 2000), has quantitative scoring system. Reliability coefficients are based on interrater agreement (0.44-0.91) and test-retest scores from 6 months to 3 years (0.38-0.54). The concurrent validity has been assessed by correlating scores with personality test and like MMPI, the Taylor Manifest Anxiety Scale and Beck Depression Inventory (Rotter et al; 1992). However, surprisingly despite the availability of scoring systems, Holladay et al; 2000 in their study found that most practitioners do not use formal scoring, but rely on their own clinical skills, and interpret the content according to their own theoretical considerations.

- **Rosenzweig Picture Frustration Study**

The Picture Frustration Study lends itself better to statistical analysis than do most other projective techniques. This is because it is more limited in coverage, more highly structured and relatively objective in its scoring procedures. Systematic efforts have been made from the outset to gather norms and to check its reliability and validity. Over some fifty years, considerable research have been conducted that deals with the psychometric properties of the instrument, and with such topics as clinical diagnoses and developmental changes, sex differences, and cultural differences (Anastasi and Urbina, 1997).

- **Draw A Person Test (DAPT)**

The interpretation of the DAPT as proposed by Machover was essentially qualitative and was based on sweeping generalizations based on single indicators. Subsequent validation studies, however, have failed to lend support to Machover’s diagnostic interpretations. Later on other methods of interpretation had been developed which were based on empirical foundations. One such method devised by Koppitz (1984) provided norms based on 1856 school children between the ages of five and twelve. However, the consensus regarding human figure drawings seems to be that they can provide only a very general idea of the level of the emotional adjustments of the children. Furthermore, drawing should be used only to generate hypothesis that must be interpreted in the context of other information about the individual (Cox, 1993).

However, it has been pointed out that though the projective test develop their own objective scoring system the final steps in the evaluation and interpretation of the data usually depend on the skill and clinical experiences of the examiner. The disturbing

### **EXPANSION OF THE APPLICABILITY OF PROJECTIVE TESTS**

The utility of projective tests only in unearthing the latent unconscious aspect of personality has undergone a dramatic change in recent years. The applicability of the projective tests have widened in recent years keeping pace with the fast changing scenario of clinical psychology.

#### **Rorschach**

Recently Weiner (1994) has postulated that data generated from Rorschach can be interpreted from a variety of theoretical positions. The use of the Rorschach data need not be limited to clinicians who adhere to a psychodynamic perspective. Rorschach has been conceptualized not as a 'test' but method of data collection that is intended to measure three things (Bornstein, 2001):

- a) Implicit motives (i.e., need states that the individual cannot describe directly)
- b) Cognitive perceptual style (i.e., the person's habitual way of perceiving and processing information) and
- c) Aspects of the individual's coping style (e.g., stress tolerance, coping resources).

In fact, the Comprehensive System (Exner, 1993) is based on a cognitive perceptual problem solving model that has been interrelated with a modern psychodynamic approach with much success (Stricker and Gold, 1999).

At present the Rorschach Comprehensive System provides indices for schizophrenia (SCZI), now renamed as 'Perceptual – Thinking Index' (Exner, 2000), Depression Index (DEPI) and Suicide Constellations that helps in identifying the conditions. On the basis of data presented by Exner, Ganellen (1996) concluded that SCZI and DEPI indices show high diagnostic efficiency. However, it is important to keep in mind that the indices can be used at best as an adjunct to more traditional diagnostic screening instruments and by themselves they are not appropriate for making diagnostic classification decisions (Bornstein, 2001).

Rorschach data is also being used to predict outcome of treatment. The Rorschach Prognostic Rating Scale (RPRS), which is thought to be a measure of ego strength that reflects outcome for treatment, is derived from Rorschach scores. Studies have examined both the RPRS and the MMPI Ego Strength scale and it was found that the RPRS had a strong ability to predict outcome ( $r = 0.4$ ,  $N = 187$ ) whereas the MMPI scale did not ( $r = 0.02$ ,  $N = 280$ ) (Meyer, 2000).

#### *Neuropsychological paradigm in Rorschach responses:*

The impact of cognitive neuroscience and neuropsychology is just beginning to be felt in Rorschach Psychology. Contemporary information processing models, schema theory and connectionist models are being used to understand the Rorschach response process. The Rorschach technique is conceived as a complex process involving all areas of the cerebral hemispheres, encompassing various aspects of visual attention and perception, object recognition, associative memory, language production and executive function. The status, utility and potential of the Rorschach as a neuropsychological assessment, though underdeveloped, is thought to be having potentialities. (Acklin and Wu-Holt, 1996)

Lezak (1994) suggested the use of the Rorschach to assess perceptual abilities in brain-injured patients.

#### **The Thematic Apperception Test:**

Recent investigations confirm that TAT is not only used for assessing understanding personality dynamics, needs, conflicts, motives but it also being used for novel purposes, like the evaluation of problem solving skills (Ronan et al, 1995), and also for the assessment of object relation (Freedenfeld et al, 1995).

Westen et al (1990) wrote "The TAT is an excellent source of data for assessing object relations, because subjects are asked to draw on their internal object representations to construct characters and interaction in response to an ambiguous interpersonal situation depicted on the card". In fact Weston has developed a coding scheme, the Social Cognition and Object Relations Scale (SCORS). Westen's scoring of object relation has been shown to distinguish between borderline, major depressive and normal subjects (Westen, 1990). The system has also been shown to be useful with girls who had been sexually abused (Nigg et al., 1991).

Unlike other projective tests, TAT is known for its non-clinical contributions in the area of personality research. David Mc Clelland's need for achievement research has been one of the more famous efforts in TAT research. (McClelland et al, 1961). Another major

### **Sentence Completion Tests**

Many sentence completion tests have been developed for the assessment of different target populations and for a variety of research uses. Some recent additions to this field include instruments designed to detect malingering during disability examinations, to predict managerial effectiveness and to assess constructs, such as defense mechanisms that may be relevant in the assessment of personality (Anastasi and Urbina, 1997).

### **PROJECTIVE TECHNIQUES AS ADJUNCT TO PSYCHOTHERAPY**

In recent times projective techniques has been thought to aid in dynamic psychotherapy. It is considered to be a vehicle for communication and overcoming inhibitions by bypassing resistance and defenses (Waiswol, 1995). In the process of translating test results the therapist stimulates gradual gaining of insight and self awareness of the patients. Projective techniques have been linked to free association methods as in psychotherapy.(Bleizer, 1982).

### **PROJECTIVE TESTS FOR SPECIAL POPULATION**

#### **The Child Population:**

The most common projective assessment procedures for children are the Rorschach Test, various projective story telling measures (e.g., Roberts Apperception Test, Children's Apperception Test), projective drawings (human figure and kinetic family drawings) and incomplete sentence procedures.

Normative data are available for children aged 5-16 years in the Exner's Comprehensive System. Currently, Roberts Apperception Test is being used with increasing frequency because of their modern appearance and because they use scoring procedures that are more objective and less reliant on psychodynamic theory. In addition, it provides normative data for 200 well adjusted children aged 6-15 years to aid in clinical interpretations. It also has both male and female versions (Adams and Culberston, 2000).

Despite criticisms regarding the validity of projective drawing techniques, they are often helpful in establishing rapport with the child. The nonverbal nature of the task also makes it amenable to younger children. Two commonly used projective drawings are the House-Tree-Person and Kinetic Family Drawing.

#### **Other Special Populations:**

Over the years a number of tests have been developed for specific populations. For example the Personnel Reaction Blank (Gough, 1991) was designed for the purpose of selecting employees for non-managerial positions, Mayer's Gravely Disabled Sentence Completion Task (Mayers, 1991) was developed to identify individuals with severely impaired mental status and Sentence Contexts (Hamberger, 1996) was developed to identify patients with Alzheimer' Disease.

Specialized apperception test has been developed for physically impaired adolescents. It contains 10 cards depicting scenes with physically impaired male and female models designed to elicit themes that may be relevant for this population (Motola et al, 1999).

### **FUTURE DIRECTIONS**

- More research ought to be generated regarding the stimulus characteristics of the projective tests. The level of speculation about what is projected and what is not would then be reduced considerably (Exner, 1997).
- Emphasis on the development of 'healthy' personality signs. In other words, utilizing projective tests not only for assessing psychopathology but also eliciting positive aspects such as self-growth, psychological resources etc (Murstein and Mathes, 1996).
- Striking a balance between nomothetic and idiographic approach in personality assessment. This should be done in order to retain the essence of projective tests.
- Development of projective tests which are less time consuming e.g., a newly developed technique is projective adult personality inventory which is a 60 item set that gives information regarding different domains of personality (Lowenstein, 1997).

### **CONCLUSION**

Cognitive approaches to treatment and assessment are ascendant in today's field of clinical psychology just as psychodynamic movement was some years ago. However, cognitive theories emphasize behavior rather than the motive, paying little attention to such complex inner states as affect, fantasy, impulse etc. Because Psychology is fortunate to

have available two different means of assessing human behavior, it would be wise to value and embrace such differences rather than finding fault with each other. Projective tests can be used to get satisfactory answers about the 'why' of human behavior and the varied complexities of human mind.

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