

**PATTERN OF RESPONSES OF PSYCHOTIC AND NORMAL
FEMALES ON RORSCHACH**

By

GHAZALA NAHEED FAROOQI

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James M. Dr.

Dedicated to Farooqis of my family

especially

to the sweat memories of my dearest father Ch. Siraj -ul-Haque and my teacher Prof. S. M. Moghni, who were desirous for my success. Their zeal for hard work and exploration of knowledge always remained source of inspiration for me whose dreams are coming true in the form of this thesis.

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CHAPTER I

Introduction

Rorschach Inkblot Test was developed in 1922 by a Swiss psychiatrist Hermann Rorschach for the purpose of personality assessment. The test consists of ten 6 3/4 by 9 1/2 inches inkblots. The five of these cards are achromatic while two cards are red and grey and three are multi-coloured. Rorschach is usually administered individually although it can be given to a group.

The basic data of Rorschach test consist of a person's free associations to ten inkblots. These associations are reflective of a person's behaviours from which the tester can conclude whether the person is hysteric, obsessive neurotic, schizophrenic, etc., or he/she is in sound mental health. The associations of a person to Rorschach are regarded as the behaviours just like any other visible activities of an individual by which a tester judges a person's characteristics. In order to attain an understanding of the behaviours which constitute the Rorschach test data, the investigator needs to know the grammar and the syntax (Appendix A) of the test language.

Rorschach Test measures personality on three dimensions; namely, cognitive or intellectual activity, emotional life or inner psychological operations, and ego strength or fantasy living.

Under cognitive or intellectual activity, the most important dimension stressed by Rorschach is good perception of form (*F+*). Good forms, *F+* are the nucleus for ego evaluation. The logic for this rests on the fact that the persons who attained good form

criterion on Rorschach, were assumed to be normals who took care of their affairs in life with usual respect for law, customs, morals and for the social graces. So, $F+$ score can be considered as a measure of ego. This deductive reasoning has been borne out inductively by the clinical experiences. The milder the neurosis, the higher the $F+$ percentage. Accuracy of form perception progresses with maturation, i.e., with the ego's growth. Lower the age range, lower percentage of accurate form perception will be observed on Rorschach. When an individual's response deviates considerably from expectancy, one looks for the explanation in psychological factors, usually emotional, which reduces or enhances the accuracy of perceptual responses.

Inner psychological operations or emotional life of the person is tapped by Rorschach test through the person's reactions to the colour and the shading tones of the blot figures. Measures of inner psychological operations are found in pure colour responses (C) and in responses where form is secondary to colour (CF), and other dimension is also shown in which form is primary to colour (FC). Inner psychological operations are also revealed in light determined responses, which include shading and vista responses, perceptions of texture and responses to white spaces.

Ego strength or fantasy living is projected in the movement responses and is essentially reported as human or animal movement, which is the main characteristic of human behaviour. Rorschach considered fantasy as a repressed fear or wish. Fantasy is considered to be introverted emotion. Thus, the test becomes an in depth instrument, which by-passes the censorship of ego, enabling the examiner to discern conflictual needs in the person, and to relate them to the entire personality structure.

A theory can have a great value in teaching the use of Rorschach, even a skilled and

intuitive clinician will have great difficulty in communicating to the students how to analyze Rorschach protocol. It is important to note that ability to make Rorschach interpretation is largely contingent upon the theoretical understanding which in turn can give greater flexibility to our efforts to analyze and diagnose personalities (Klopfer et al., 1956).

Theoretically Rorschach is said to rely heavily on psycho-analytical concepts. Most of the vocabulary is borrowed from psychoanalysis in which the reports are written. Two main processes of Rorschach performance are a person's association and his perceptual organization; the former is greatly derived from psychoanalysis.

According to Rapaport, Gill and Schafer (1980) when one sees the blot a complex system starts functioning in the brain where the integrative processes are in fact psychoanalytical in nature. Rorschach's associational process is structured and cultivated by the basic needs and interests, which are yielded by old experiences and set by recent ones. However, Rorschach working hypothesis about perceptual balance has no room in psychoanalysis. Rapaport, Gill and Schafer (1980) have tried to explain how these processes are involved in bringing about any specific kind of response, and how these responses are affected by various kinds of personality characteristics and psychopathology.

Rorschach provides a thorough view of a person's personality processes as he/she functions and not a catalogue of traits or predispositions, or abnormalities, as indicated by majority of personality tests. This notion is based upon the theory that perception is individually motivated, selective and organized in terms of person's needs, experiences and habitual patterns of responses, as well as, by the properties of stimuli itself. As

ambiguous stimuli are unfamiliar problems to be solved, they set in motion the process of perceiving, associating, selecting, and rejecting which provides the opportunity to study these processes in action (Klopfer & Davidson, 1962).

Some of the questions, with which the Rorschach analyst approaches the response record are : How accurately does the person perceives? What is seen by most of these? How rich the experience and knowledge is being brought to the cards? How much anxiety is aroused in the face of the problem of responding to vagueness? What is his way of handling anxiety, and to what extent can he get under control? How responsive he is to stimuli from the outer world? what normally excites, pleases or threatens him? How productive, flexible and adaptive is he? (Klopfer & Davidson, 1962).

The Rorschach test is an attempt to examine the multi-dimensional concepts of personality of an individual, i.e., to describe a person in terms of his ego functioning, his emotional state, his unconscious, his set of dynamic traits, and defense. According to Lindzey (1961) ..."since its introduction in 1922, the Rorschach has attained remarkable application, yet there are frequent shortcomings of research in this area. Samples are woefully inadequate in size, are used to obtain data that have been applied to subjects from apparently different populations; statistical techniques are employed with considerable disregard for their theoretical and mathematical assumptions. Constructs are postulated in such a manner that the transition from the theoretical position to the Rorschach data is tenuous, making subsequent generalizations unlikely to be supported by cross-validated studies" (pp. 56-57).

Rorschach's current status can be stated in Exner's (1974) term as ... "since it's

inception Rorschach has stimulated great interest, extensive use, and considerable research. The decade of 1950s represents the "prime" years of Rorschach in clinical psychology. Between 1950 and 1960, twelve major works were published on Rorschach (Ames, 1952, 1959; Beck, 1950, 1952, 1960; Hertz, 1951; Helpern, 1953; Klopfer, 1954, 1956; Phillips & Smith, 1953; Piotrowski, 1957; Rickers-Ovsiankina, 1960; Schafer, 1954). By 1955 more than 3000 articles had appeared concerning the test" (p.3). In spite of its limitations, the use of Rorschach has been very common and the judgements made on the basis of it appear, by and large, to be more sophisticated. Historically, Rorschach was not the first to use inkblots, but he was first to develop a work-book and a method for handling the complex individual response pattern. The tests is widely used in clinical diagnosis, and has been introduced in the armed services, for research and diagnostic purposes, and has been applied to a variety of problems, including psychopathology, developmental psychology and recently to vocational guidance. The appearance of Rorschach Comprehensive system (Exner, 1974, 1978, 1982) has provided a great deal of additional research in the area. Exner (1982) expresses his views about the Rorschach system as the future of Rorschach will be marked by more sophisticated and intricate research that will yield findings to enhance our understanding of how it can be used best to serve those who are its subjects.

Administration Technique

There are several different procedures for the administration of Rorschach, yet, all techniques agree on the following points:

- a) the purpose of the test is to get the subject to react to the blots in his own way with a minimum of suggestions from the examiner;
- b) a full record of all the subject's verbalization is essential;
- c) time to the first response on each card and total time for the

experiment be recorded and ;d) response must be followed by an inquiry to determine to what part of the blot the response refers, what aspect of the card determines it, and how the percept is conceived and organized?.

There is a general acceptance of the division of test in two parts; first is known as performance proper and second is called inquiry. Klopfer, Ainsworth, Klopfer and Holt (1954) advocated, that after the presentation of all the cards without any interruption or question, cards are to be re-presented, responses are to be read back to the subject, and questions are to be asked to elicit the additional information necessary for scoring. Rapaport, Gill and Schafer (1980) have introduced a blind fold inquiry which follows the presentation of each card and these protocols are not readily identifiable or scorable on the basis of spontaneous verbalization. Responses of the subjects are scored afterwards, by different experts, without knowing the case study and the subject. Yet most workers advocate Klopfer type additional probing method, associated with response proper.

There are other variations in administration technique among the leading experts with regard to the wordings of instructions, amount of pressure exerted to elicit a response, position of subject in relation to examiner, handling of cards, and the like. In contrast to the less formal introduction of Klopfer et al. (1954), S. J. Beck, A. G. Beck, Levitt and Molish (1961) have offered an introductory statement. Only Rapaport, Gill and Schafer (1980) were in line with Rorschach's original question about the cards: "what might this be"?, yet the selection of administration method must be guided largely by the examiner's training and preference.

The above discussion refers only to the individual Rorschach administration. Various methods for the group administration have also been devised. The Harrower Group

Method (1965) uses slides and booklets in which responses are written, scored and interpreted in the same way as in the individual test administration. However, the material in group testing lacks detailed inquiry data on doubtful responses.

Scoring System

Like different administration techniques there are variety of scoring systems. All the systems have the following common features:

a) the proportion of responses to the card as a whole, to prominent detail, and to various small or unusual details; b) the determinant of each response according to the influence of qualities inherent in the figures themselves, such as colour, movement and shading; c) content classified in various categories; d) various quantitative relationships and percentages derived; e) form level; f) originality or commonality.

For a beginner it will be strange to note that various ratios and indices which are computed in each Rorschach system are called differently. As one discovers that a determinant such as shading is called *K* in one system, *Ch* in another, and *V* in a third, yet their differences are not so important as more apparent are the differences in interpretation. Similarly, *M* (movement) has been thought to represent intelligence, native endowment, creativity, wealth and flexibility, fantasy, activity, unconscious wish, amount of inner resource and control of impulse. Beck et al. (1961) and Lindzey (1961) have emphasized the wish fulfilling and creative character of *M* responses, whereas, Rapaport, Gill and Schafer (1980) have stressed its implications for wealth of intellectual resources, depending on form quality. Beck et al. (1961) have emphasized certain types of shading responses as an indication of anxiety. Rapaport, Gill and Schafer (1980) point out the

relation of shading to anxiety, but more particularly to the manner in which it is handled. Hertz (1986) and Klopfer et al. (1956) utilize interpretation peculiar to their own system. However, Rorschach variables are interrelated and interdependent, and results are not simply the product of the test, but of the interpreter who reads and organizes them. Scores are only a step towards interpretation rather than the interpretation itself as is the case with most objective tests. The scores may, thus, be checked for agreement with a criterion measure. No Rorschach score, singly or in combination has any such meaning except as the interpreter considers it in relation to the entire record.

The Rorschach test is a clinical technique, not a psychometric method. As such, it is subject to the limitations of other complex, flexible, clinical tools. In its present stage of development it is an aid to psychological investigation and interpretation, the usefulness of which depends upon the clinician who applies it. It is said that differences regarding its administration, scoring, and interpretation could be reconciled through research. These problems offer challenging opportunities for future work.

Prerequisites of the Individual Plates

Looking at ten blots one notes that they possess certain qualities. Some have colour while others do not, and the colours vary in hue and intensity. Some areas of plates are heavily shaded and others are not. Series of figures used in the test were gradually developed on the basis of empirical observations. The peculiar qualities demonstrated in these plates have been described by Rorschach (1922/1975).

Plate I. Black: Failure in response is almost never encountered. It equally stimulates form and movement responses. It is easy to interpret it as a whole and in details.

Plate II. Black and red: Kinaesthesias are more easily seen here than in plate I. It contains a prominent intermediate figure. Here colour occasionally induces a suggestion of colour shock.

Plate III. Black and red: Kinaesthesias is easiest to see in this plate. The red is separated from the black.

Plate IV. Black: Form and movement answers are both comparatively difficult on this plate. One finds it more difficult to interpret this plate as a whole than in details. The figure is generally considered 'beautiful' but the interpretation is difficult.

Plate V. Black: It is the easiest form to interpret. It is always interpreted as a bat. Schizophrenics frequently fail to answer on this figure, and if they do, they see moving people in it.

Plate VI. Black: Generally, it is called the most difficult of the figures.

Plate VII. Black: The essential part of this plate is the white intermediate figure, a rather obvious oil lamp, rather than the black figures. This plate presents the converge of plate V, in that normals really see the lamp while schizophrenics frequently perceive oil lamp.

Plate VIII. Multicoloured: It has harmonious colours and forms. Colour shock is apparent in neurotics. It is easily interpreted in detail.

Plate IX. Multicoloured: It contains disparate colours and forms. Kinaesthesias is easily aroused. In addition, a definite intermediate figure is also on this blot.

Plate X. Multicoloured: Disparate blots are perceived on it. Whole answers are almost impossible on this plate.

Reliability of Rorschach

Some researchers have demonstrated split-half reliability of Rorschach. Vernon (1936) has reported 0.91 correlation for a number of responses of both the halves. Hertz (1962) has found reliability of 0.83 for all kind of scoring categories and ratios. Thornton and Guilford (1936) have investigated reliability of Experience Balance scores by split-half method and found a reliability coefficient of 0.94. "The coefficient of reliability of the Rorschach test factors obtained by split-half method may be considered satisfactory, since they compare favourably with most of the correlations reported in the data. The ten cards of Rorschach are sufficient to elicit a fair sampling of an individual's behaviour or personality in terms of the above test factors" (Hertz, 1962; pp.303-304).

The split-half method for Rorschach reliability is justified as this would reveal the influence of variability-performance factor, the adequacy of the instrument, and of the standardization of the procedure in reference to the test factors selected for the study (Hertz, 1962).

Test-retest reliability is not considered as a good reliability measure because of possible memory effects. Studies have shown that test- retest reliability is less stable in the Rorschach signs of *W%*, *VIII*, *IX*, *X %* and *P%*. Swift (1944) has found that responses were remembered by an average of 47% of the sample of school children. On retesting, the reliability coefficient was not found very high in some of the scoring categories. Possible memory effects, difference in testing conditions and also the fact that

reliability coefficient is not very high in some scoring categories when retested, are the major problems of retesting in Rorschach.

Klopfer et al. (1954) assert that instead of determining the reliability in such a manner to minimize any instability, it is important to test the limits of stability of the Rorschach. They further argue that instead of proving Rorschach technique as a reliable one it is more important to find out to what extent and under what condition the Rorschach technique yields unreliable results. Reliability of Rorschach like other tests is also affected by the personal contact and other factors like examinee subject relationship etc. Subject's emotional state and his mood also affects the Rorschach results.

A question also arises that whether the traditional criterion of reliability are sufficient, or does the Rorschach performance reflect a stable function. The predictive value of any test lies upon the relative stability of the function measured or assessed. However, shifts and changes are expected even within the framework of a relatively stable personality organization (Exner, 1974). It is expected that Rorschach technique will reflect changes in the developmental trends. Rorschach is assumed to reflect mental and environmental changes of the individual. Therefore, there are few studies of Rorschach over the period of rapid development i.e., adolescence. McFate and Orr (1949) have reported developmental trends with increasing age of 199 subjects when tested four times for 11th to 18th year. They reported an increase in *R* and decrease in *FM* and *CF* responses. Improvement in Rorschach performance after therapy is reported by Harris (1960) and Piotrowski, Sherry and Keller (1985).

The reliability studies using test-retest method under varying conditions are likely to indicate that various functions tapped by Rorschach technique have a fair degree of

stability and there are reliable ways which describe how the method can be used.

Another type of reliability used in Rorschach validation research is inter-scorer reliability. For most of objective tests we need not to concern ourselves with scorer reliability. However, for such measures as projective personality tests, one should attempt to determine how much error may occur in a score due to the person (s) who did the scoring or rating (Hertz, 1962).

In the 1930's a few pioneer workers with a small but active following introduced the test in different countries began important research on Rorschach scoring system. Since then controversy has by no means died out. The issue now centres around question of research methodology, problem of establishing reliability and validity. The actual status of the test in clinical work began with Beck et al. (1961), Klopfer-Kelley (1946) and C. Buhler, K. Buhler, and Lefewer (1949).

Validity of Rorschach

Like other projective tests validity of Rorschach always remained under discussion. It is generally said that instead of validating the whole test it is pertinent to ask, Is Rorschach a valid account of the functioning of the individual?. The question also arises about the validity of interpretive hypothesis which relates to the truth and accuracy of prediction about an individual's personality. In fact, the validation of Rorschach follows the scientific process of validation of it's hypotheses. Generally, the validation research is greatly extended and supplemented by the use of systematic scientific controls. The validation problem of Rorschach has been discussed by Cronbach and Meehl (1955); Macferlane and Juddenham (1951); Schafer (1953); Schneider (1962); Meehl (1954); and

Vernon (1936).

There are differing points of views regarding the validation of Rorschach. A major view deals with how well Rorschach works and what are its limitation?. Fosberg (1943) has described it as the "fallacy of personal validation", i.e., the description of personality emerging from the Rorschach is found to 'fit' the individual patient.

Rorschach test samples the actual behaviour which is the common rationale to all psychological tests. Behavioural generalizations are made on the basis of the test performance and results. Rorschach (1922/1975) had emphasised that his test should be considered as personality appraisal method instead of test of personality. As Rorschach deals with n functions or variables, this presents one of the greatest problem related to its validation (Palmer, 1962). This multiplicity of interrelated and interdependent variables constitutes the most important difference between projective techniques and other personality tests.

Each one of Rorschach variable is associated with at least one interpretive hypothesis. It is important to note that the task of validation pertains to the various sets of interpretive hypotheses of Rorschach rather than to any of its prototype interpretations. It has been argued that the evidence of invalidity of any one hypothesis or a set of hypotheses can not be generalized to the test material (Klopfer et al., 1954).

"Major problems of validation which are specific to Rorschach and general to other projective techniques are as follows:

- 1) problems pertaining to the interrelatedness of interpretive hypotheses; 2) problems related to the nature of Rorschach concepts and their communicability; 3) problems

stemming from the time-consuming nature of the Rorschach for which short-cut methods are used to overcome the drawback; 4) problems related to Reliability, and 5) problems related to the outside criteria against which hypotheses are to be checked," (Klopfer et al., 1954, pp.443-461).

It is generally said about the Rorschach technique that it is holistic rather than atomistic. This fact introduces serious problems in validation research. Altus and Thompson (1949) have studied Rorschach signs of intelligence, namely *F*, *W*, *M* and *A%* and correlated them with other tests of intelligence. They found low correlations between criterion measures and Rorschach by using the holistic method.

Vernon (1936) has obtained a correlation of 0.83 by using matching method. However, training of judges, reliability of rating and heterogeneity of groups might have contributed towards this high reliability. Palmer (1962) has emphasized the validity of judges rating rather than the validity obtained through some external criterion. Cronbach and Glesser (1957) have criticized the matching technique as this can not indicate the degree of rightness or wrongness of each prediction. They emphasized qualitative features of Rorschach protocol which deals with breaking down into component statement and testing these against an outside criterion.

Ferguson (1951) says... "that difficulties in interrelated variables could be overcome by working with the interpretation rather than with scores and treating the Rorschach examiner and Rorschach examination as an inseparable combination and using configurational analysis" (pp.147-149). Other aspects of validation are validation of hypotheses related to sequence and content analysis.

Generally, validation research tended to ignore the hypotheses used in sequence analysis and content analysis. Pascal, Ruesch and Suttell (1950) asked 237 subjects to point out parts of the blots that could be male or female sex organs (in a special testing the limit procedure). Their findings provided a check for the area hypothesized to have sexual significance in sequence and content analysis. Another study in this connection is done by Meer and Singer (1950) who studied the father and mother and liked most and least cards in testing the limit procedure. The findings confirmed the hypothesis, however, the problems related to interrelatedness of interpretive hypotheses were magnified.

The problems of translation of concepts is essentially the same as Rorschach tried to communicate his findings to those who are non-familiar with Rorschach technique. The problems relating to concepts and their communicability make it necessary to caution that validation research should be planned and the results should be discussed by those who have more than a superficial understanding of the basic concepts involved in Rorschach interpretive hypotheses.

To avoid time consuming scoring of Rorschach some short-cut test methods have also been devised. Harrower and Steiner's Group Rorschach test (1965) is an example. Other type of short-cut test studies include, e.g., study of colour shock in Rorschach. Lazaraus (1949) used two sets of cards one standard and other achromatic, and found that 30% of the group showed high signs of colour shock. He concluded that the phenomenon of colour shock is mainly the result of difficulty of integration of form and colour.

A study by Wallen (1948) has demonstrated the use of Rorschach in four conditions; 1) like most vs. like least card; 2) reverse vs. standard order; 3) upright vs. inverted

presentation; 4) achromatic series vs. standard. The results showed that cards differ in the degree of perceptual difficulty leading towards colour shock.

Care should be taken in selecting an external criterion against which to test any hypothesis. In validation research it is expected that the concepts will become classified and more easily communicable through examination of the correlates.

Among different type of validities, concurrent and construct validities have been demonstrated for projective tests. Camble and Fiske (1959) have pointed out in order to demonstrate the construct validity of a test one must know not only that a test correlates highly with which it should theoretically correlate, but also that it does not correlate significantly with variables from which it should differ. In terms of Rorschach validation, one can demonstrate discriminant validity by using various distinguishing and critical categories of Rorschach. "In other words any conceptual formulation of trait will usually include implicitly the proposition that this trait is a responses tendency which can be observed under more than one experimental condition and that this trait can be meaningfully differentiated from other traits" (Camble & Fiske, 1959; p.100).

Rorschach in Cross-Cultural Studies

A good deal of research has been conducted employing projective techniques to investigate cross-cultural phenomenon. Hermann Rorschach (1922/1975) was the first who employed projective technique in cross-cultural research. He suggested that the test can be used fruitfully to compare a variety of different groups. He claimed (1922/1975) that experience type should be different in various people, and races, and these differences would be greater if the difference between the races were greater. He also

claimed that the test itself is technically so simple, that it may be administered, through an interpreter, to the most primitive Negro as easily as to a cultured European.

An early cross-cultural study employing the Rorschach performance of Moroccans and Europeans was done by M. Bleuler and R. Bleuler (1935). They found little difference between Moroccans and Europeans in form, movement and colour responses as well as in popular and original responses. However, differences were found in the small detail (*d*) responses given by very few persons. They have reported that frequency of original (*O*) responses of Moroccans was considered as the sign of schizophrenia in Europeans. They interpreted it not in terms of personality differences but as a function of underlying cultural differences. Difficulty in perceiving *W* (whole) in Moroccans, may also be the result of unfamiliarity with the pictorial material.

Another study investigating the role of culture in personality development has been done by Du Bois (1944). She administered Rorschach to 37 Alores, 17 males and 20 females. The Rorschach scoring and analyses were carried out by Oberholzer who had no knowledge of either the Alores culture or of individual subjects. A number of direct observations, life history data, and interpretive material was used to provide standards for comparison with the Rorschach interpretations. General picture of Alores, that emerged from Rorschach analyses, was as fearful, suspicious, distrustful, indifferent, high on apathy and lacking vigour. Du Bois found greater correspondence between anthropologist's field observation and Rorschach interpretation. On the basis of these findings Du Bois advanced a psychocultural syntheses of Alores culture highlighting the developmental process and other major institutions of their culture.

Honigmann (1949) conducted a study about the culture and ethics of Kaska Indians

with the help of life history method and Rorschach. The sample consisted of 28 subjects, 14 adult males, 5 adult females, 5 boys and 4 girls. He described that the common responses of Kaska culture indicated egocentricity, deference, flexibility, dependence, and emotional isolation. The quality of responses of both male and female groups resembles in the human movement and colour responses.

Wallace (1952) used Rorschach to assess the modal personality of Tuscarora Indians. The major findings were based upon 70 Rorschach protocols reflecting the age and sex characteristics on Rorschach of the Tuscarora adult group as a whole. The test was administered under standard conditions and analysis was carried out using Klopfer's scoring procedures. Wallace has also compared 16 personalities of Tuscarora and Ojibwa, based upon Hallowell's (1942) data. Wallace used the term common personality type, a type of personality more closely approximated by more individuals. He found great similarity in the modal profiles of Tuscarora, Ojibwa and American subjects. Tuscarora modal personality revealed a strong urge to become passive and dependent, with fear of rejection and punishment. Besides, other personality characteristics like aggression, ultimate incapacity to feel, to adapt, to evaluate the environment realistically, and a concomitant dependence upon stereotype and deductive logic were also found.

In another study Rorschach was administered to the children of the island of Ceylon by M. A. Straus and J. H. Straus (1957). The test instructions were given in the native language. The sample consisted of 73 children, 34 attending school in small village and 39 attending school in a big city. Results of the study gave support to the validity and the utility of the concepts of national character and modal personality. They found that the Sinhalese children were markedly different from American children of comparable age as indicated by their Rorschach protocols. Test taking attitude in two cultures was taken

into account while drawing inferences. The high *R*, and low rate of card rejection by the Sinhalese subjects were viewed against the background of local culture. This normative data was compared with the American norms of the same age group. The authors placed particular emphasis upon their restriction of emotional responses, absence of rich inner life and creativity, and high incidence of anxiety and insecurity.

On an acculturated Chinese group, living in Hawaii, 35 Rorschach protocols were collected by Richards (1954). Averages for the number of conventional Rorschach dimensions were compared with Klopfer's characterization of healthy ideal American. These Chinese groups were also compared with the average Rorschach profile of a group of American soldiers, and with Beck et al's (1961) normal sample. It is found that the average performance of Chinese differed relatively from the performance of the American subjects in various comparison groups. Females Chinese subjects showed more anxiety and depression in response to the "father" card. They were found more oriented toward inner life, and showed more evidence against masculine protest. Male subjects showed more disturbance in sexual and interpersonal relations, they were less spontaneous, and more concerned with social conformity and prestige.

In Harvard Values Project Kaplan, Rickers, Maria and Joseph (1956) administered Rorschach to a total of 170 subjects. Among these half were veterans and half nonveterans. The purpose was to compare four cultural groups sharing the same geography in terms of modal personality. The sample consisted of 53 Zuni, 27 Navaho, 20 Mormon, 23 Spanish-American subjects, in the age ranging of 17-47 years. Rorschach protocols were scored following Klopfer and Kelly's scoring scheme. The differences found between the four cultures were on *Fc*, *Cf*, *Fc* and *m* responses only.

A study on the national character was done by Carstairs (1957) in an Indian village to understand the essential differences between Indian and Western personality structures. The investigation was conducted in a typical Hindu village not heavily influenced by Western culture. Subjects were 45 males including 13 Rajputs, 11 Brahmins 12 Baniyas and 9 Muslims. Sample of Carstairs belonged to the three highest Hindu castes, and Muslims. He described the development of Hindu personality in connection with conscious and unconscious processes. Carstairs has given the summary of Rorschach results to describe the personalities of these groups. Study revealed the process of personality formation in an Eastern society with reference to their respective castes. There found to be essential differences between Indian and Western personality structure. Carstairs was of the view that in practice, Rorschach test proved most useful in indicating areas of emotional involvement of individual informants, suggesting topics for further talk. He indicated that Rorschach findings were consistent with the interpretation derived from the clinical interviews and direct observation.

Abel and Metraux (1959) conducted a study on sex differences on the natives of Montserrat, an island in the British West Indies. In this study Rorschach was administered to the subjects. Results of the Rorschach revealed that the females showed more conscious dependency need as compared to the males who showed more tendency to accept and cling to the objects. The male sample also proved to be more imaginative and creative in their inner life. Adolescents seemed to have more anxiety than the adults, the female adolescents seemed better to cope with the anxiety than the males.

A study on acculturation was done by Hallowell (1942) on the groups of American Indians belonging to Alogonkian culture. The sample consisted of 217 subjects, divided into three Berns River groups including Inland, Lake side and Flambeau groups. Results

of Rorschach indicated that Flambeau showed an introversive personality structure as compared to the other two groups. Significant differences appeared between Flambeau and other two groups. All three groups projected the original Alogonkian culture on Rorschach, but they showed marked differences in terms of acculturation to the white culture. Flambeau were the most acculturated, whereas, the Ojibwa inland were the least. Hallowell's study has been criticised for its failure to examine the possible impact of varying degrees of acculturation upon test-taking behaviour.

Another study on the effect of acculturation is that of Barnouw's (1979) conducted on Wisconsin Ojibwa. The author has collected 107 Rorschach protocols of Ojibwa. Barnouw has found greater insecurity in male than in female subjects, which was characterized by longer response time, higher rate of card rejection, and lower incidence of human movement responses. Out of 107 subjects, 53 male subjects gave no colour responses. He interpreted it as an evidence of emotional isolation of the subjects. In spite of its limitations related to the description of data and method of administration the study has the merit to be based upon large amount of data.

Spindler (1952) studied the relationship between the culture and personality with the help of socio-cultural and personality variables. He took a sample of 61 female and 68 male subjects. The comparison of female and male subjects, revealed marked Rorschach differences in their responses. He found that the modal males were more disturbed, tensed and showed signs of diffused anxiety, and decreased emotional control as compared to the modal females. The study is a prototype of cross-cultural application of Rorschach and Klopfer's specific interpretive rules.

The study of Abel and Hsu (1949) provides information relevant to the modal

personality of the Chinese as well as the personality correlates of acculturation and sex variation. Sample included 15 males, largely educated in China, 10 males born and educated in America, 12 females born and largely educated in China, and 19 females born and educated in America. Protocols were analyzed according to Klopfer's scoring system. Differences in the content of responses were analyzed. Authors described that the modal Chinese personality had the traditional emphasis upon control of impulse, balance between inner and outer world, and presentation of psychological distance between self and others. As a modal group they showed stronger conformity.

A study by DeVos (1954) provides the comparison of Rorschach protocols of American born Japanese and the Americans. Three American born Japanese groups, Issei, Nissei, and Kibei (who were sent back to Japan for a part of their education) and three American groups; normals, neurotics and schizophrenics were compared on Rorschach. Results showed that some of the prevalent elements of personality underlying manifest behaviour changed with acculturation. These findings provide the basis for a number of generalizations concerning differences between the Japanese-American and American subjects. However, within group comparison found that more acculturated group Nissei tended to move towards typical Rorschach American norms. The author's generalizations about the personality of Japanese-American included a high degree of intellectual and personal rigidity, marked ambitions and striving in the intellectual sphere, which often overstripes their actual capacity. Moreover, they were found to display body pre-occupation, and sado-masochistic tendencies in the content of their responses. On the basis of these findings the author believed that the persons were maladjusted.

Another study to see the influence of culture on the personality was carried out by DeVos and Miner (1958) on Arab and American groups. The comparison of Rorschach

protocols of the two groups revealed significant differences between the Algerian and the Americans. Arab subjects showed greater variability in scores on rigidity, exhibited more unpleasant contents in their responses, and showed greater hostility. Investigators also tested certain Rorschach dimensions and specific cultural beliefs like rigidity, maladjustment, positive Rorschach content, body preoccupation, and hostility. These dimensions were assessed with the help of interview and then correlated with Rorschach protocols. Significant interrelationship were found in seclusion practices, discipline of children and religious beliefs, namely, that attenuation of traditional beliefs, showed a consistent pattern in urbanized Arabs. These dimensions were related to inter-psyche tensions that were expressed in symbolic form in Rorschach content in a number of individuals.

MacGregor's study (1946) has demonstrated the cross-cultural utility of Rorschach in different cultures. Author analyzed the personalities of Sioux tribe. Results of the Rorschach test were found to be highly correlated with other sources of information like other projective tests and observations.

As culture plays a significant role in the development of personality, the interpretation of Rorschach in different cultures requires understanding of those qualities of relevant culture which are only typical to that. An extensive investigation of a Guatemalan community is done by Billing, Gillin and Davidson (1948) who used Rorschach to find out the differences between the Indians, predominantly from the Mayan culture and Ladinos from European culture. They also studied the effect of local system upon the formation of adult personality. Authors found that blind interpretation of the Rorschach records is correlated with the ethnologist's opinion. The Indian subjects showed a tendency for predominance of colour responses, percent of VIII+ IX+ X, and

FM,m to *Fc+c+C* ratios. It was also found that Indians were not well-adjusted. A low incidence of detail responses suggested an inability to deal with the ordinary realistic problems. Authors concluded that adult Indian is actually dominated by his primitive drives and early fixations. He does not respond readily to outside stimulations. The authors concluded that differences in the personalities are the effect of different degrees of acculturation. An examination of Rorschach of the adolescents in two groups revealed that Indians appeared to be more emotionally responsive, and gave less stereotype responses than the Indians who were less prepared to meet the demands of daily living, with high percent of *F* responses and white space responses (*S*) showing rigidity and oppositional tendencies.

The cross-cultural applicability of Rorschach was demonstrated by Hallowell (1942) when he compared an American sample with the samples from other cultures. He found a considerable similarity in terms of average productivity. The proportion of human and animal responses also showed a considerable consistency in the subjects belonging to diverse cultural settings. Problem only aroused in movement and popular responses cross-culturally. This was explained by the analyst in terms of relative cultural inference. Anthropologist, like Margaret Mead (1928) was of the view point that at least use of projective test in other cultures tells about the salient features of a particular culture.

The use of Rorschach in cross-cultural studies has affirmed the existence of individual differences in personality. There is enormous variation in personality even within apparently homogeneous, nonliterate societies. Research findings indicate that individuals representative of different socialization practices and different cultural backgrounds respond differently to most projective techniques. Studies of Rorschach cross-culturally have also led to these generalizations that varying degrees of acculturation

are accompanied by various personality attributes and perhaps by variation in general level of adjustment.

Hallowell and Spindler's (1942) study has shown that personality inferences based upon the Rorschach test are consistent and parallel with the inferences derived from ordinary field work methods. Studies of DuBois (1944), Gladwin and Serason (1953) also suggest such congruence.

Description of modal or typical personality for particular cultures have also been derived from the Rorschach test findings. A lot of material on the personality portraits has been written to describe individual or groups belonging to specified non-literate societies. Evidence for the cross-cultural utility of Rorschach has been put forward by correlation of different projective test data. Henery (1951) studied Hopi and Navaho under relatively control circumstances using different projective tests. The personality inferences derived from Rorschach, life history information and observation gave strong positive evidence for the utility of Rorschach with alien groups. Henry has also criticised the use of Rorschach cross-culturally. But, despite some limited exceptions, one generally finds a positive evidence for the utility of this instrument in cross-cultural studies.

The rationale of cross-cultural use of Rorschach in different cultures is that the responses of the subjects are not accidental but they are determined by the psychological attributes of the subjects. That is why the responses to the ambiguous stimuli of Rorschach obtained from people with varying cultural backgrounds are comparable and diagnostic. Bruner (1948) claimed that Rorschach implicitly provided the axiom around which the dynamic role of perception must be build. Enormous amount of data in support of Rorschach shows that the test which is based upon perceptual principles is in no way

culture bound.

On the problem of unfamiliarity with the pictorial material, Klopfer et al. (1956) have found that their Ojibwa subjects responded well on the Rorschach without a trial blot. They later concluded that a trial blot is only useful in the case of testing young children and non-literate groups. Only problems in the use of Rorschach on non-literate groups are said to be of administrative nature.

Problem of responsivity of Rorschach is also dealt in terms of comparison in different cultures. Klopfer et al. (1956) have provided almost a sample of 1676 subjects of American Indian groups and people in the Pacific. A number of other samples including Spiegel's sample of adults, Gardner's nurses, and Ames samples of American children was also included for the purpose of comparison. Beck et al's (1961) criterion of medium productivity (R) on Rorschach i.e., 20-30 R was found to be met in both of the groups. Result shows that the most responses of adult subjects in both groups fell in the medium group.

Variation in productivity are said to be related with the level of socio-psychological adjustment. Klopfer et al. (1956) compared the productivity i.e., R average of Flambeau, Wisconsin adult subjects with less acculturated Bern river Ojibwa adults. The R average of Flambeau and Wisconsin was found to be 17 as compared to 27 in Ojibwa. Acculturation process in Flambeau showed a great deal of psychological maladjustment. This finding is also supported by Spindler's (1952) findings of 139 Menomoni Indians. Subjects were divided into different groups according to their acculturation level. Rorschach protocols were obtained on these groups. The most acculturated group, the elite in socioeconomic terms, were the most productive, giving average of 27 R ; they

were also the best adjusted group of Indians. The least acculturated Menomini were the least productive, giving an average of 16.5 *R*. However, despite the low mean productivity, the cross-cultural utility of Rorschach can not be underestimated. Productivity of Rorschach is reported to be increased with the maturation.

On the impact of culture and language Moon and Candick's (1983) study examined the relationship between Korean and American cultures and languages on Rorschach responses. The results showed some shifts as well as some consistencies in Rorschach responses. The Korean subjects appeared less likely to integrate percepts in *Ws*. *Their* percepts were less differentiated in lower *F+* %, constriction and rejection were also found, which were typical to Korean culture. However, results showed that the Rorschach cards were perceived in many similar ways by individuals in Korean and American cultures. It also reflects that the initial differences of Korean subjects were reduced by acculturation.

A crucial question in terms of cross-cultural use of Rorschach test is, what is seen and how it is seen by different people and whether the responses have the same psychological significance everywhere?. Variation in the responses obtained customarily are the comparisons relative to the objective attributes of the figure and the general content category. Objects names seen on the Rorschach card in a particular locality, with reference to qualitative features of the blots, can be classified in a limited range of categories e.g., like human, animal, nature, etc. Klopfer et al. (1956) say that 3/4 of the responses fall in human (*H, Hd*) or animal (*A, Ad*) categories. They presented data of North America and Micronesia, which included six groups of native people. It was found that except Ifaluk, a large majority of all responses of other groups fell into *H, Hd, A, Ad* category for both children and adult subjects. The proportion of *H, Hd: A, Ad* also

shows the same, except high *A*% in American Indian group.

Phenomenon of the consistency of content category is in fact an empirical support to the comparability of Rorschach responses cross-culturally. About object content, test is likely to be different in terms of groups as well as individually, and it also depends upon the range, nature, valence and qualities of the object defined in a particular culture. The behaviour in the environment of the subjects needs to be studied for the understanding of its psychological relevance. Animals unknown in the behavioural environment can not be represented in the responses in this content. Klopfer et al. (1956) have discussed the reasons of 100 *A*% of Ifaluk. According to them the only animals known to them were domestic dogs and the pigs, and predominant fauna were fish, some insects, and many kinds of lizards. It is interesting to note that their content category was natural objects other than animals. These were also the result of the absence of wild mammalian.

Broad analogy in any culture would be the perception of sexual contents. Klopfer et al.(1956) have reported sexual responses in Spiegel's sample as 0.03%, while for Ojibwa's it was found to be 0.01%. Actually they expected a much freer verbalization of sexual contents than actually occurred. This expectation was based upon their observation of conversational freedom in sexual matters. The authors explained that sexual references in Ojibwa were highly channelled in conversation. Rorschach responses analyzed in terms of the on going socio-cultural system, perception, motivation, and affective responses of the individual. Similarly, in the human movement responses a wide variety of differences were present.

A study by Abel and Hsu (1949) was conducted on China born and American-born

females. In terms of *M* responses, the China born females showed not a single instance of human beings attacking or moving against one another, while in the American born females 25% of the *M* responses indicated aggression or fear of aggression.

Klopfer et al's (1956) analysis of northern Ojibwa, Berns River, indicated that majority of their subjects' responses included an overwhelming incidence of people sitting, standing, laying down, watching, without any reference to any kind of social interaction. In the inland group, the most aboriginal in culture, 82.3% of adult's *M* responses were the exhibition of this characteristic. Content wise, the lake side more acculturated people showed 72.5% *M*'s content. Such type of responses are regarded as the suppression of aggressive impulses. These people seem to reflect amiable and placid attitudes.

Albeit all the variations, data has supported that common principles of Rorschach can be applied to protocols of subjects with any cultural background. For the support of this hypothesis blind analysis was used. Classic example of blind analysis is the analysis of a single record of 20 years old Arapesh of Guinea, from the data of Mead (1928). In this study analysis of Rorschach protocol was done independently by different investigator's like Abel, Harrower, Klopfer and Miale. Results showed correlation in the Rorschach interpretation of various researchers of the personality type of Arapesh culture. Similarly, Oberholzer (1944) analyzed blindly the Alores on Rorschach and he found high correlation with the ethnographic data of Mead.

One broad category of Rorschach studies are based on group comparison of Rorschach performance of two or more groups or the comparison of single group with normative data or hypothetical normal record. Usually, in group comparison studies,

quantitative analyses are being made and detailed qualitative analyses of the protocols are omitted. Generally, group comparison studies are exploratory in nature which involve some kind of testing for the diagnostic signs or predictive indices of Rorschach.

A problem in cross-cultural studies of Rorschach is low responsivity of subjects on Rorschach. Barnouw (1979) finds it reason in the typical Rorschach testing situation in which the subject and the tester are isolated from routine social environment. It is observed in the most primitive cultures that people are never alone, but are apt to be surrounded by relatives, as privacy may be suspected. Due to this reason the Rorschach protocols gathered by anthropologists lead to the impoverishment of many Rorschach protocols. This problem has been demonstrated by Preston's (1964) study of Northwest coast Alaskan Eskimos. Their Rorschach's had relatively few responses, with few movement, colour or texture responses. Preston argued that more than two thirds of her Eskimo subjects seemed anxious, angry, or inhibited in taking the tests, which she suggested as one of the explanation for the impoverishment of the records.

Similarly, the study of Williams (1958) conducted in Lebanon, with the help of an interpreter, showed very less responses of Lebanese villagers with a group mean of 12.5. These records were very unproductive, lacking in movement, colour and texture responses, as was the case with Alaskan Eskimos. Williams has explained this phenomenon in terms of unfamiliarity of villagers with the test material and the act of responding to the inkblots was found to be a frightening experience for them.

Barnouw (1979) points out that some responses can only be made in the cultures which have been exposed to Western influence. This applies especially to *k* responses, in which a blot, or part of it is seen as an *X-ray*, although, there could be an equivalent

responses in which objects are seen through water. Such type of considerations have led some psychologists to deny the applicability of Western-based Rorschach norms to protocols from other cultures. Yet, the main argument for the use of Rorschach in test-alien cultures is that the test has proved to be very revealing and field information gathered from other sources have been found to be in close agreement with the data of Rorschach.

Another controversial issue in the use of Rorschach cross-culturally is the application of Rorschach to diagnose abnormal behaviour especially the schizophrenia . Al-Issa (1970) showed that the validity and reliability between modes of perception of inkblots and personality seemed to be doubtful when the Rorschach was applied to the groups other than the Europeans and Americans. Contrary to Al-Issa's findings M. Bleuler and R. Bleuler (1935) claim that Rorschach is best applied to the different cultures because it requires minimal verbal abilities. In their study on desert Moroccans, subjects gave a much more fine-detail responses on Rorschach as compared to the Europeans. In the West fine detail responses are regarded as an index of compulsive tendency or mental disorganization e.g., such as schizophrenia. The Moroccans responses to Rorschach showed the prevalence of logical arbitrary habits of thought as characteristic of Moroccans. Henery (1964) reported jungle people of South-America who used rare details in Rorschach responses, he explained it in terms of their need to observe their surrounding in order to survive. This finding suggests that criterion of abnormality differs in different cultures. Abnormal test responses as defined by Western criteria may be characteristic of the non-Western societies and may be normal. However, more cross-cultural studies are needed for such generalizations.

Cook's(1942) finding indicate that Samoans also differ from the Western subjects,

giving more responses to the white space of Rorschach blots. According to the Western criterion the Samoans and Moroccans could warrant the diagnosis as Schizophrenics.

Lindzey (1980) has explained the role of cultural experiences and psychological needs in shaping the perception of ambiguous material which has been consistently confirmed in the extensive work on Rorschach in different societies. A study by Joseph and Murray (1951) indicated that two tribes living on the Island of Saipan maintained distinctive perceptual pattern of Rorschach. Sanua (1959) found that longer the ancestry of Jewish families in United States the better the adjustment of adolescent as measured by Rorschach multiple choice inkblot test. By contrast, the result on the Rorschach inkblot showed an opposite trend for the third-generation Jewish adolescents. The results gave evidence of a greater degree of anxiety and insecurity on the Rorschach test.

Rabin (1970) administered Rorschach on children being reared in Kibbutz. The study was conducted with the purpose to see whether the Israeli semi-communities differed from the Jewish children of Tel Aviv and Haifa or not. Sample consisted of two groups of 30 Kibbutz and 25 non-Kibbutz male and female adolescents who were 19 years old. The Rorschach was administered to them individually. The maximum number of responses to Rorschach was 31, which was found consistent with the usual expectation. The results of the Rorschach test data significantly differentiated between Kibbutz and non-Kibbutz children. The Kibbutz adolescents were found to be more productive and less inhibited in responding to the test. They emphasized more play and orality themes and less aggressive themes in the contents. Kibbutz subjects tended to be more productive as compared to non-Kibbutz. On the measure of first reaction time, the Kibbutz group reacted more quickly with less anxiety and inhibition as compared to non-Kibbutz group. However, their overall adjustment i.e., freedom from signs of deviation was similar to

the control group.

Goldfried, Stricker and Weiner (1971) have presented a systematic survey of available data on the norms, reliability and validity for a number of specification of Rorschach technique in various cultural practices. Similarly, a comprehensive and integrative summary of published normative data for children and adolescence was prepared by Levitt and Truuma (1972) combining data from 15 studies. Literature review shows that Rorschach is developed and often validated in the context of Western culture. This instrument can be extended to human beings generally. It also appears that an extensive use of Rorschach by anthropologist is an illustration of how a test like Rorschach can be refined and improved when it is used cross-culturally.

Card Pull of the Rorschach

Card pull is the tendency of the test stimuli to provoke or predispose certain cognitive and affective responses in the subjects. Ranzoni, Grant, and Ives (1952) first gave the formal definition of card pull as those properties of the ink blot which seem to predispose the subject to the use of certain aspects of the blot. According to the researchers like Beck et al. (1961) the analysis of a large number of responses suggests that few blots or parts of blots have a particular stimulus 'pull' i.e., a tendency to elicit a particular, identifiable class of responses.

Card pull is also known as the non- projective element in the projective response. It denotes the reality, which do not come from within the subject, but corresponds (to more closely) to actual picture perception. Suggestive is the key word often used to card pull. Rorschach (1922/1975) discovered that ink blot must be more than spattering ink

blots on card board. A 'good' stimulus must be pregnant with interpretive possibilities, i.e., what is suggested and the potentiality of the subject, . He observed that the test does not induce a free flow from the subconscious, but requires adaptation to external stimuli.

Magnussen and Cole (1961) studied 93 children from a child guidance clinic. Subjects were asked to select the Rorschach cards which represented their mother, their father, the card they liked best, the card they liked least, and the most frightening card. Card X appeared to be the best liked and card IV the least liked card. Card VII was most frequently chosen as mother card and card IV as father card, and card VI was considered as the most frightening card.

Although the stimulus value of Rorschach cards has been investigated by a variety of techniques, very few lend themselves for cross study comparisons, and despite the sampling problems general conclusions regarding stimulus value are drawn. Card IV and VII are considered to be the father and mother cards respectively. The studies of Brown (1960), Kamano (1960), Levy (1958), Meer and Singer (1950), Rabin (1959), Rosen (1961), and Schafer (1973) have proved the stimulus value of these cards.

Knowledge of the stimulus value of each card is of crucial importance in the interpretation of an individual's protocol. Many researchers like Beck et al. (1961), Exner and Weiner (1982) and Ranzoni, Grants and Ives (1952) have given qualitative description of responses facilitated by the cards in adults. According to Peterson and Schilling (1983) the basic instruction in projective testing employs the subjective mood to play between actuality and potentiality (inherent in the projective stimulus). The subject is encouraged to play with the stimulus.

The test subject is asked to find/create/discover some thing to give it to the tester. When tester asks the basic question "what might this be"?, which is nestled within the basic instructions, and might employ the subjective mood to convey a sense of possibility, opportunity, permission and potentiality. Peterson and Schilling (1983) analyzed the phenomenon of card pull in terms of this basic question. Firstly, the subject must attend to the test stimulus and tactfully acknowledge that there is a reality which serves both to inform and to constrain the response. Secondly, the subject is encouraged to transcend and to modify the stimulus, to forsake actuality for potentiality. Rorschach (1922/1975) suggested that "P" or popular responses, represents responsiveness to a consensually confined reality, which are the card pull of a particular card.

Lot of material is written in favour of specific psychological implications to individual plates. Most of the research on card meanings is focused on whether or not the terms father or mother can be ascribed to card IV and VII (Peterson & Schilling, 1983; Kamano, 1960; Rabin, 1959).

On the intra-protocol plate failure study of Wagner and Hoover (1970) is an attempt to clarify the meaning of the Rorschach cards by adapting a different approach to the problem. His method includes an analysis of intra-protocol overlap as manifested through combinations of card failures. Thirty-three subjects were found who had an average or above average IQs, but who nevertheless, exhibited exactly two failures on Rorschach. Analysis of pairs of card rejections revealed a disproportionate number of card IX failure and a clustering among plates IV, VI, VII and IX. Let us see the card pull of or facilitative qualities of each Rorschach cards derived from the Exner and Weiner (1982) data:

Card I. This card presents an easy Rorschach task, very few subjects fail to respond. *W* is the most common response, three main kinds of *Ws* appear; i) global *W* bird, bat or butterfly; ii) a *W* using the white space as eyes or nose and; iii) *W* organizing the blot inside and central figures. *Ws* face response is most frequent at 10 years, thereafter, it decreases and again increases at 15 and 16 years. Popular response of bird, butterfly is found 23% in the age of 10 years, but found increasing steadily 40% by the age of 16. Perception of ghosts, devils or witches on this card is more common at the ages 10-13 years.

Card II: *W* response is the most common with contents like two persons, two animals and so on. About 70% of girls are assumed to give this common response. The two animals are more common than the two boys. *Ws* response is less common for this card, it is usually frequent at 10 years, thereafter, it drops sharply. *W* as total global. Generally a bug or butterfly, for the whole age range it is given by 13% of boys and girls. Use of *S* (white space) is slightly more common among girls than boys. It reaches its peaks at 12 to 14 years. Colour response is a significant feature for Rorschach interpretation. Both boys and girls tend to give equal number of colour responses for the total age range of 16-18 years. Majority of subjects are reported to give *M*, *Fm* responses to this card but among girls more human (*M*) movements are found than the boys. Overall 40% girls give more *M* responses than boys. This card is found to be average in difficulty for the Rorschach series.

Card III: Detail (*D*) responses increase for this card. The total number of responses (*R*) are greater for this card than the other two. Red colour often facilitates *D* responses. Whole (*W*) responses are most common single responses to this card. About 75% of the 16 years old give this response, with girls than boys giving this response more

frequently. Two men are most frequently seen. *Ws* response, using whole space of blot for eyes or nose is given by 20% of 16 years old. Other varied responses are face and human anatomy. Colour (*C*) response to red area is found more in the girls than the boys. Girl's responses to this *D* area rise to a peak at 14 years and then decreases. Animal movement (*Fm*) is much less common than human movement (*M*), and inanimate movement (*m*) and are unusual on this card.

Card IV: This card is assumed to be the father card. It is predicted that card IV would show a greater semantic similarity with the concept of father. Again this card facilitates more *W* responses fewer *D* responses. Childhood popular "giant" is replaced by adult popular animal skin. The later is said to be more masculine response, as the responses given by boys are twice the responses given by girls at all ages. Card IV is the blot least chosen as the liked card. It is seen as a difficult blot, 10% of 11 years sample showed failure to this card.

Card V: This card is found to be the simplest one because of its facilitation of *W* response as bat, butterfly or any winged creature. A greater uniformity of responses is found for this card. Bird is much less common response, while winged bugs and mosquitoes, etc., are uncommon variants at all ages. Large usual details (*D*) if given are usually in addition to the whole (*W*) response. Frequently given detail is to the central figure usually seen as rabbit or donkey. The side projection is perceived as the legs of animal or the crocodile heads. Inanimate responses (*Fm*) are more common which according to Klopfer and Davidson (1962) are the expected responses for this card. Girls tend to give more *Fm* responses than the boys.

Card VI: Whole (*W*) and cut of whole (*Wl*) are most common responses to this card.

Bear skin responses are found popular for the adolescents, with boys giving more such responses than the girls. The use of the whole blot as a single animal or insect occurs with the same frequency for boys and girls at 10 years, but thereafter it declines. Landscape responses appear first at the age of 12 years for girls and at the age of 13 years for the boys. For the top projection *D* (detail) the responses are often of insect, bird, bat or an animal. This response is given more often by girls than by boys. At 10-11 years it is reported more. This response is usually generalized for the whole card. Midline is infrequently used at all age levels as backbone or snake. Shading response is the most important facilitating feature of this card. Generally, shading is used as the part of animal skin and texture. The use of shading is found to increase with the age. It is 12% at the age of 10 years and reaches to 30% at the age of 16. Inanimate movement (*m*) is common for this card, which does not increase with the age. Studies showed a rise of 25% at the age of 13 years then drops again to 13 or 16%. Many of these *m* relate to animal stretched out skin, explosion and shooting movement. Sex responses are also found for this card. With the increase in age, especially in adolescence, responses like sex anatomy or symbolic sex forms are seen. *Fm* response is the most common depersonalized form such as a giant, monster and then by an ape or a bear. The sex of the figure seen is always male. One of the *D* responses which is common at all ages is the "boat". It is markedly found in boys than in girls. Another important response is the *W* on this card. About 20% of the sample at each age level says bird or butterfly. The amount of *M* and *Fm* is average for this card. Decrease in *M* and increase in *Fm* is steadier as the human figure is disappearing on this card. In amount of shading quality it is second to the card IV. Number of shading responses are equal for both sexes. Shading, darkness, unevenness; these qualities of cards facilitate the responses related to body-image problem. Highly primitive response like dead or rotten leaf are given by 10% of 14 years girls. It is assumed as one of the difficult cards in the series. It is second only

to card IX in terms of refusals or rejections. Approximately 10% of the subjects are reported to reject this card at the age of 10-11 and 15 years. It is said that the blockage on this card is more a function of shading quality or the sexual overtones than its difficult shape.

Card VII: *W* and *DW* are common response category of this card. Usually two upper portions are perceived as animals or human responses. This card is symbolized as the mother card. Kamano's (1960) study indicated its significance as mother card. This card generally evokes soft, small, weak, permissive and feminine responses as compared to the card IV, which includes responses including harder, larger, stronger, more strict masculine and aggressive verbatim. *D* responses are frequent for all three portions/tires of the blot. Upper part of this card or tire 1 is usually interpreted as an animal's or a person's head. The tire 2 is interpreted as animal's head, while the lower tire from each side or both sides is interpreted as a butterfly or moth. Centre detail of the bottom area is rare among boys, which never reaches 10% of the responses. Among the girls it increases throughout their age range with making 24% of the responses in the age of 15 years. Usually, this detail is interpreted as a track, path way or Niagara fall, etc. Sexual responses to this part are also common, which can be looked as the reflection of concern with sexual developments. Almost 50% of the subjects use more *Fm* responses for this card. The use of shading such as clouds and smoke are also common.

Card VIII: Here *D* responses are common than *W*'s. The details in the responses to this card may be perceived because of colour. The side details in the responses resembles with the animals. The studies showed that well over 90% of all the subjects give some sort of animal interpretation to these areas. Among the younger subjects *W* responses are so dominant that they only see the animals climbing up on the rock or on the tree. They

also see the animal crossing stumps and rock at water edge, with his reflection in the water. This type of animal category is usually that of a mammal.

Klopfer et al. (1954) assert that it is frequent in adults to see animal figures on the side pink *D*'s and to attribute movement to them that it's absence becomes noteworthy. Besides the popular animal form, more striking feature is the introduction of colour to this card. Though the requirement of responding to a coloured blot is new for the subject, yet it is least often refused in the series.

Card IX: This has vague, overlapping forms and blurred outlines and is regarded as the most challenging in the series. High rate of rejections and diversity of responses are common to this card. Also 10% of the subjects usually reject this card. Response variations in the content and determinant category are wide. *D*, *Dd*, and *S* responses are relatively prominent than the *W* responses. This blot does not facilitates a good *W* responses like painting and colour design. Natural scenes are among the popular responses to this card. Card IX facilitates the use of any other determinant at each age level. *M* and *CF* are the one of the most often used determinants to this card. The content of girls' responses tend to be more dramatic than that of the boys. Girls produce more scenes and reflection responses to this card. Difference is also found in the *m* responses of both sexes. Girls give more fountain, water fall responses, while boys give more responses of explosion and eruptions.

Card X: This is different from other cards and is the best liked card by the majority of the subjects. It generates more large usual detail (*D*) responses. It's form is separated and discrete, with bright colours, usually well defined. Most stimulating quality of *R* (number of responses) are quite high to this card. About 80% of the subjects give *D*'s. Rate of *W*

responses are about 40%. The animal scene is the most common *W*. Among *D*'s, crab, green caterpillar and a rabbit's face are considered as popular one to this card. Central yellow is often seen as dog by the girls. Use of *F* responses only are common at 15 years for this card. Though, this card has many bright colours it does not necessarily stimulates *C* responses.

Popular Responses

To some experts popular responses are statistically determined. They vary among different populations according the age, educational level, cultural setting and the like. Klopfer and Davidson (1962) have described following popular responses to the ten Rorschach cards:

Card I: " *W or W1*". Any winged creature with body in the centre and the wings at the sides is seen either in action or stationary.

Card II: Any whole animal or part of an animal. The animal seen is usually with a large head and thick neck. Often, the texture quality of the skin is used. The responses include animal, dog, rabbit, bull, or rhinoceros.

Card III: (i) Entire black area: Two human figures are seen in a bending position. Lacks are seen in lower area, side *D* is seen as figures in action and it also includes dressed up animals, (ii) inner red *D* is seen as bow, tie, hair ribbon, or butterfly.

Card IV: None.

Card V: Any winged creature with body in the centre and wings at the sides, it may be seen in action or stationary.

Card VI: With or without the top *D*. Skin of the animal which is used as the shading qualities of the blot.

Card VII: None.

Card VIII: The responses include a four legged animal which is given to the pink side area. The animal must be seen in action.

Card IX: None.

Card X: The popular response is many legged animal which is given to outer blue areas. An animal's head that has long ears or horns, i) Outer blue *D*: Any many-legged animal, such as a spider, crab, or octopus, ii) Darker lower green *D* (*D2*): Any elongated greenish animal, such as caterpillar, garden snake, or tobacco worm, iii) Light green *D* (*D7*): The head of an animal with long ears or horns, such as rabbit, donkey, or goat.

Popular responses give some insight in the culturally given stereotypes of various age groups. Such populars help to give insight into and understanding of the stereotypes of childhood, their formation and their transformation. This also helps to locate to what extent any given person is able to think along the line of his own age range. For popular and original responses the criteria of frequency is used. According to Klopfer et al. (1956) the popular responses (*P*) are those which are essentially similar in content and are given to the same parts of the blots by many subjects. The original (*O*) responses are

given much less frequently and still others will be so unusual that they will occur not more than once in one hundred times.

According to Klopfer et al. (1956) *P* reflects the ability to participate in common thinking or wish. It is the collective thought or cooperative ability of an individual. It is the ability to think and feel as a part of a group, hence, the phenomenon of variability in this content is very important. Some individuals tend to be more conformed, while some deviate very far in the opposite direction i.e., they show individuality. Too few *P*'s, therefore, may be taken as one of the index to a schizophrenic adjustment. Universality of certain concepts to Rorschach is sticking even to the divergent groups. Many questions in this context are being asked. For example, what are the *P* frequencies for particular groups, whether, there are unique or characteristic *P* for particular age and sex, education, national background and different cultures. These questions need to be studied. Research on this is usually ignored by experts to see its cross-cultural etic and emic. As far as *P*'s are concerned, Klopfer et al. (1956) have made comparisons of *P*'s, i) among 23 Ojibwa children in the age range of 6-11 and the much larger groups of American subjects of 4-10 years and ii) between the *P* responses of 49 Ojibwa children with age range of 6-16 years, and 102 Ojibwa adults. Comparison indicated that in both groups of younger subjects there were corresponding *P*'s to cards II, III, V and VIII. A criterion of one in six was used in both series for *P*. The many legged animal (side blue on card X) which is the usual *P* for card X is found to be absent at all age levels among Ojibwa. Yet, Rabbit on card X which is rated as *P* by all experts is found to be a typical *P* at all the age levels in Ojibwa. Indian and American subjects did not differ from each other in terms of *P* forms (Klopfer et al., 1956).

Best known *P*'s are four, animal to card VIII, 'animal' to card II, Rabbit to card X,

and winged creature to card V (Rorschach, 1922/1975). These four *P*'s are assumed to reflect the transcend age differences, national differences, and cultural differences. These are found in adults as well as in children of both American and Indian origins. Klopfer et al. (1956) have interpreted the *P* forms of Ojibwa's in the context of their living in small face to face groups during winter and summer. The high number of *P*'s may be the index of conformity to a highly homogeneous pattern. There is still need to gather more data of group frequencies about universal *P*'s. The cumulation of this data will give more comprehensive perspective of the psychological significance and the determinants of their responses. As Klopfer et al. (1956) say universal *P*'s may involve the objective characteristic of the card or are a function of past experience with certain universal classes of objects. The role of development is also very important. Group differences will more likely be apparent among adults, when originality and deviation from the norms are more frequent. The nature of cross-cultural data of *P*, *R* and *M*, seems to give some common directions. Rorschach protocols in varied cultures showed both consistency and variability.

CHAPTER II

DIAGNOSTIC INDICES OF RORSCHACH

Clinical psychological testing starts with the proposition that a person's distinctive style of thinking is indicative of ingrained features of his character make up, i.e., person's enduring modes of bringing in harmony the internal demands and the press of external events (Schafer, 1973). Different kind of tests are being used by clinical psychologists for the purpose of making clinical diagnosis and Rorschach is one of them.

Recent findings of Piotrowski, Sherry and Keller (1985) and Archer and Gordon (1987) have shown that Rorschach, with the Exner's (1978) comprehensive scoring system, is the most frequently used test by the members of Society of Personality Assessment. In terms of its use as a clinical instrument for both diagnosis and clinical assessment it ranks second after the Wechsler Scale. There is enormous amount of data available focusing on the ability of Rorschach to accurately detect depression or schizophrenia in adolescent and adult patients.

Goldfried, Stricker, and Weiner (1971) suggest that instead of looking for a global approach to validate the Rorschach data, the relevant question is, " what is Rorschach valid for"?. For example, is it a good measure of degree of hostility? can Rorschach be useful in predicting success in psychotherapy? (p. 37).

Of the different types of validities, concurrent and predictive validity of Rorschach have been demonstrated, whereas, construct validity is still very low (Cronbach & Meehl, 1955). However, validation studies on clinical groups and variety of personality measures have produced encouraging results (Goldfried, Striker & Weiner, 1971; Exner, 1978;

Zubin, Eron & Schumer, 1965). The potential of Rorschach test to identify schizophrenics has long been acknowledged. Exner (1978) has provided an excellent summary of recent findings regarding the validity of the Rorschach for the diagnosis of schizophrenics and borderline cases. Rorschach users have demonstrated the sensitivity of this technique in differentiating schizophrenics from non-schizophrenics and depressives from non-depressives (Rapaport, Gill & Schafer, 1980; Piotrowski, Sherry & Keller, 1985; Beck et al., 1967; Weiner, 1980).

A study by Mahmood (1987) is an attempt to demonstrate the diagnostic validity of Rorschach technique in cross-cultural settings. Comparison of Pakistani and British sample of schizophrenics showed that critical categories including weak form level (weak *FLR*), colour responses, (*CF + C*) contamination (*Cont*), confabulation (*Conf*) are the same in the two groups. This study well demonstrated the diagnostic validity of Rorschach in cross-cultural setting.

In connection with Rorschach validity, Klopfer et al. (1954) say ... "it is important to see that the assumption upon which the conclusions are based are the valid ones. In other words it is to see that validation of certain interpretive hypotheses not the validation of whole test per se" (pp.460).

Rorschach is the most widely used projective technique for personality assessment (Piotrowski, Sherry & Keller, 1985). Many studies indicate that the specific response patterns to Rorschach cards can be successfully used in the assessment of personality dispositions (Archer & Gordon, 1987).

There is a good deal of evidence of Rorschach's use for clinical diagnostic purposes

(Archer & Gordon, 1987). The specific patterns of responses on Rorschach cards and variations in these patterns in the case of different patients are helpful in diagnosing various mental and behavioural disorders (Exner, 1986).

It has been shown that in schizophrenics, the typical personality features are thought disorders, impaired perceptual accuracy, poor emotional and ineffective interpersonal relations. If the responses of persons are translated into Rorschach signs then confabulation, contamination, poor negative form level rating (*Weak FLR*), poor *form* (*F-*) and whole minus (*W-*) would be expected on Rorschach cards (Mahmood, 1987). Various Rorschachers have identified a number of critical variables useful in diagnosing schizophrenia.

Rorschach Normative Studies

Different normative studies have been carried out on children, adolescents and on normals and patients in order to give the developmental norms of Rorschach and to demonstrate the differential diagnostic utility of Rorschach. McFate and Orr (1949) provided developmental norms for boys and girls. Data has been reported in terms of various ratios and percentages.

Children's developmental norms of Ranzoni, Grant and Ives (1950) focus on the card pull of Rorschach. Children usual and unusual responses were reported by Halpern (1953). In another study Beck et al. (1961) have reported norms of 155 children from 6 to 17 years while using Rorschach in cross-cultural research. Siddiqui (1966) has compared Pakistani and Thai (226 each) children and found significant differences in the pattern of responses of both the groups. The author has suggested separate Rorschach

norms for each group.

Ames et al. (1971) made comparisons of 700 children with age range of 10 to 16 years. The sample was divided into 50 boys and 50 girls in each age group. However, no significant difference was found between the responses of pre-adolescents and adolescents which according to the authors was due to the sample bias.

Levitt and Traummaa (1972) have reported 15 Rorschach normative studies including Ames groups. Though they have made distinction between the intellectual level of subjects, yet, they ignored the demographic studies of the groups.

Exner's (1978) normative study provides Rorschach more extensive data comprising of 2,545 Rorschach records. Data is being reported in the form of summary tables, frequencies, means and standard deviations for all the Rorschach categories. The sample consists of age norms of 5 through 16. Exner and Weiner (1982) have provided the data of 1870 normal children in 12 age groups.

Normative data of different occupational groups have been reported by Cass and McReynolds (1951) on a sample of 104 normal adults. Another study in a commercial organization has been conducted on a sample of 71 normal men and 86 women, reported by Beck, Rabin, Thiesen, Molish and Thetford (1950). Norms have been reported with means and standard deviations on all Rorschach categories.

On clinical populations Exner (1978) has provided data of 965 subjects including 325 non-patients, 185 non-psychotics from OPD's, 90 inpatients, with character problems, 210 inpatient schizophrenics and 155 inpatient depressives. Exner has tried to take

representative sample of all strata.

There is a general assumption about the Rorschach that it is a culture-free test. Any productions on Rorschach represents the subject's unique projections rather than a response to common meaning. However, this assumption is being refuted through many studies. Takahashi and Zax (1966) made a comparison between American and Japanese college students to examine the stability of meanings of Rorschach variables for different cultural groups. It was found that the cultural variables resulted in a greater number of significant differences between the Japanese and American subjects. This study also revealed that cards I, IV, VII and VIII had different meanings to the Japanese subjects, whereas, cards VI, IX and X conveyed different impressions. Rabin and Limuaco (1967), compared Filipino college students and concluded that while there was a good deal of commonality between the two, there was also the evidence of culture specific contents.

In India some normative studies have also been conducted using Rorschach on different samples (Kumar, 1961; Prabhu, 1967; Asthna, 1982; Somasundaram, 1971, & Dubey, 1982). However, differences have been found in the normal profiles of these adults, which Dubey (1982) attributes to the differences in the scoring systems. In Pakistan the first normative study was conducted by Haque (1985) who has reported the Rorschach data of 100 normals, 50 neurotics and 50 schizophrenics including both males and females from Lahore. The other study was conducted by Farooqi (1987) on a sample of 100 female adolescents from a local college of Islamabad. Recently, a study has been completed (Jaleel, 1990) reporting normative data of 150 male adolescents.

Haque (1985) has compared three local samples of normal, neurotics and

schizophrenics from Lahore. The norms provided in the study are limited to a small number of local sample. The results suggest that the Rorschach can be a useful diagnostic tool in differentiating Pakistani schizophrenic adults from normal Pakistani adults. Farooqi's (1987) normative study of Pakistani female adolescents revealed that when responses of Pakistani sample were compared with Western norms, the group showed various signs which in the West were taken as the indicator of pathology. Hence, these culture specific indicators were explained in terms of groups socio-cultural context and age. Jaleel, (1990) found in a similar study of normal males that besides commonalities the group also gave certain responses which were markedly different from the responses of people in the West.

However, these three preliminary studies conducted on Rorschach in Pakistan were mainly focused on establishing the cross-cultural utility of Rorschach on different groups with local norms, which served as the base-line data. Albeit the limitation of local norms, small number of samples, the importance of these as an exploratory studies can not be ignored.

Rorschach Indices of Schizophrenia

Studies on schizophrenic thinking and verbalization have agreed that a schizophrenic often shows impaired conceptual functioning. Apparently, he loses to a considerable extent the ability of abstraction and tends to think along archaic, primitive and concrete terms (Kasanin, 1944). The loss of the ability to abstract thinking is one of the early signs of malignant schizophrenic process and has been subjected to investigation by various researchers. Rapaport, Gill and Schafer (1980) have pointed out that deviant verbalizations are significant indicators of pathological and deteriorative process. C.

Buhler and K. Buhler (1949) have developed a check-list which ties together a number of Rorschach indicators. These have been summarized in a Basic Rorschach score. They have found that this basic Rorschach score is significantly related to the degree of psychopathology in the patient, and reported that it is possible to differentiate the normals, the neurotics, and the intellectually impaired on the basis of these scores.

According to DSM-III (1980) following six criteria are taken for the classification of schizophrenia:

1. The presence of certain specific kinds of delusions or hallucinations or incoherence, marked loosening of associations, markedly illogical thinking, or marked poverty of content of speech.
2. Deterioration from the previous level of functioning.
3. A duration of disturbance at least up to 6 months.
4. The absence of preexisting affective disorders.
5. Onset before the age of 45.
6. The absence of an organic mental disorder or mental retardation.

Rorschach indices of disordered thinking of schizophrenia are dissociated response style, unusual verbalization and abstract preoccupations, rambling, disjointed responses that jump from one idea to another usually indicating dissociation. Beside unusual verbalization including deviant verbalization, inappropriate combinations of form perceptions, autistic logic and overgeneralized responses are indicators of schizophrenia on Rorschach (Exner & Weiner, 1982).

Inappropriate verbalizations of schizophrenics when projected on Rorschach,

constitutes inappropriate form combinations, incongruent generalizations, fabulist combinations, intimation and autistic logic. The inaccurate perceptual functioning that characterize schizophrenia is reflected on the Rorschach in poor form quality and inadequate number of popular responses. According to Exner and Weiner (1982) ... " the more closely Rorschach percepts correspond to the actual shape of the blot areas, the more strictly subjects are addressing to the objective, realistic features of their experience; the more subjects deviate from commonly seen forms, on the other hand, the poorer is their grasp on reality. Similarly, absence of popular responses points to impaired perceptual accuracy" (p. 223).

Various normative data have established the diagnostic significance of various level of form quality of Rorschach. Exner (1982) states that when form level falls below 70% one begins to raise question of pathologically and impaired perceptual functioning. Form level rating below 60% always identifies clearly with inaccurate perceptual functioning. Other indicators of Rorschach inaccurate perception are poor *FLR* and inadequate populars. Normative data indicate that subjects who give fewer than four *P* answers may be pathologically impaired in their ability to recognize and endure conventional modes of response (Exner & Weiner, 1982). Rorschach indicators of interpersonal ineptness are, inadequate *M* and inadequate *H*. Similarly, Rorschach indices of inadequate controls are disturbed content, preoccupation of person with aggressive and sexual fantasies and poor colour integration.

However, Exner (1986) cautions that the diagnosis of schizophrenia based on Rorschach data should not be offered unless there is reasonably unequivocal evidence for the presence of the two most common features in schizophrenia: i) serious problems in thinking and ii) serious problems in perceptual accuracy.

The critical categories defined for schizophrenia are *W-*, weak *FLR,(M-)*, *(M-)...Hd*, *CF+C*, *C'*, *Cont* and *Conf* (Rapaport, Gill & Schafer, 1980; Piotrowski and Lewis., 1950; Beck et al., 1965; & Weiner, 1966). Other indicators which can distinguish schizophrenics from non-schizophrenics are whole (*W*), large usual detail (*D*), small usual detail (*d*), rare detail (*Dd+S*), form plus (*F+*), *R* plus (*R+*), sum of all colour (*SumC*) and original (*O*) responses (Rapaport, Gill & Schafer, 1980; Piotrowski and Lewis., 1950; & Mahmood, 1987).

Rorschach Indices of Depression

Exner and Weiner (1982) have described depression as almost every one experiences it during his or her life time which may be due to periodic or prolonged frustration, irritation fatigue or helplessness." Most of the people who experience depression identify and conceptualized in varied forms . However, Rorschach data do indicate depression even though the observable features and the history do not confirms this. The most common feature of depression projected on Rorschach is low egocentricity index. This feature is almost universal. The second feature is sum of grey, black and shading answers exceeding the sum of *FM+m* answers" (p.129).

Exner and Weiner (1982) have identified following indices of depressive psychosis:

1. Vista and form dimension greater than 2.
2. Colour-shading blend greater than 0.
3. Ego centricity index less than 3.
4. Greater right side *eb*.
5. Special score *MOR* greater than 2.

Exner and Weiner (1982) have reported that a reasonably consistent pattern appears when the normative samples are reviewed for the two features most commonly associated with depression in adults. This pattern consists of $\text{sum grey-black+shading} > \text{sum } FM+m$ and low ego centrality index. The higher right side *eb* occurred in only 196 of the 1,580 records. Thus, Exner and Weiner (1982) concluded ... "that index of depression is relatively low for non patient children. The frequency of low egocentricity indices is also very modest among the nonpatient normative samples"(p.132).

Exner and Weiner (1982) in another study, selected 88 protocols from the 236 records that had been collected in a longitudinal study. These included 44 protocols in which sum of grey-black and shading was greater than the sum of *FM+m* as reflected in the *eb*, plus 44 control subjects who were selected randomly from the remaining 192 records. The 44 protocols in the target group contained 836 responses of which 58 (6%) were scored *MOR*. The 44 protocols in the control group contained 867 responses of which 39 (4%) were scored *MOR*. The average of the target group was 131 *MOR* responses while the average for the control group was 89 *MOR* responses.

Exner (1978) studied the protocols of children of 8 to 16 years of age who were affected or attempted suicidals. These children had been taken within 60 days prior to the act. The mean morbid (*MOR*) was 4.62. This result indicated that a great number of suicide attempters and effectors gave large number of responses in which Morbid Contents were clearly present. Another study was conducted on a group of 37 depressed and 37 non-depressed children under the hypothesis that those children meeting one of the diagnostic criteria for depression would yield more *MOR* answers in their records than would patients/children who did not meet this criteria. These findings supported the potential usefulness of the *MOR* scores in diagnosing depression. The children diagnosed

as depressed gave greater frequency of *MOR* responses than children with low features of depression. In addition to studying the presence of *MOR* responses, these 74 records were also reviewed for the presence of other Rorschach variables commonly found among depressives. These responses included, vista and form dimension responses, colour-shading blends, low ego-centricity index, and higher right side *eb*.

Exner (1978) has done a follow-up study on a sample of 22 depressed youngsters of age range from 10 years 4 months to 14 years 8 months. Results indicate that 17 of the 22 subjects gave protocols with at least one colour shading blend, and more than 17 gave vista and form dimension answers. They had lower egocentricity indices, greater right side *eb*'s and more *MOR* answers.

In general, significant indicators of depression include: slow timing, *F%* over 70%, little or no *M* or *FM*, colour if used more often *FC* than *C*, avoidance of red, shading sparsely used and commonly with more emphasis on diffusion as shading shock, lack of organization in *W* responses, High *D%*, constricted *eb*, often but not always low number of overall responses. All this may suggest a defense or flight from intolerable affect (Alcock, 1963).

Critical categories of Rorschach pattern of responses for psychotic depressives are vista responses (*V*), colour-shading blends (*C.Sh*), egocentricity index (*EC*), achromatic colour responses (*C'*) and morbid content (*MOR*), experience balance (*EB*), *R* average, form colour responses (*FC*), Affective ratio (*Afr*) scores (Viglione, Brager, & Haller, 1988). The other categories which may distinguish psychotic depressives from non-psychotic depressives are whole responses (*W*), large usual detail responses (*D*), small usual detail responses (*d*), rare detail responses (*Dd+S*), form determined responses (*F*),

form plus responses (*F+*), sex responses (*Sex*), x-ray (*X-ray*) responses and animal (*A*) responses (Rapaport, Gill, & Schafer, 1980; Piotrowski & Lewis., 1950; Beck et al., 1965; and Weiner, 1966).

Rorschach Patterns of Different Scoring Symbols

***R* as a Diagnostic Indicator**

Degree of inhibition and *R* appears to be negatively correlated. In the pathological range, a low *R* is suggestive of depression or neurosis with strong depressive colouring of a simple or chronic schizophrenia . The most severely depressed patient's average range of *R* is from 11 to 15, and in less depressed it is from 10 to 18, while in non-depressed it ranges from 22 to 28 responses (Rapaport, Gill, & Schafer, 1980). The average *R* of the sample of Beck et al. (1961) is 32 and the average *R* of Klopfer et al. (1954) ranges from 20 to 45. A high *R* suggests intense ideational activity. However, inhibiting factors even in the normal range are likely to cause failure to respond on Rorschach. In psycho-pathological range depression appears to be an outstanding cause of failure on Rorschach. Obsessive-compulsive and over ideational pre-schizophrenics almost never fail on any of the ink blot, whereas, *R+*, the average number of subject's responses i.e., the productivity of the subjects related with positive form level is indicator of normal healthy personality (Klopfer & Davidson, 1962).

Reaction-Time (*RT*)

The *RT* on Rorschach is defined as time that lapses between the presentation of a card and the offering of the first response. Within the normal range, slow reaction times

are mainly because of effect of inhibition and very short *RT* reflect extensive ideational productivity (Rapaport, Gill & Schafer, 1980).

Manner of Approach

Subjects' manner of approach and perceptual processes are evaluated by location scores. Sequence analysis i.e., the order of *W*, *D*, *d*, *Dd+S* indicates whether individual's approach to the problems is logical or loose, methodical or confused?. How well he\she can organise material or is able to get to the heart of the problems or does he\she skirts anxiously around the edges (Klopfer & Davidson, 1962)? An average record of a normal person contains 25 *R* responses, 8 *W*'s, 14-16 *D*'s 1 or 2 *Dd*, and *S* scores.

Location Scores

***W* responses**

This response is scored when the area chosen refers to almost all of the inkblot. Whole responses reflect one's organizational tendencies and abilities to see things as a whole. These responses include variety of *W*'s, *DW*, *D/W*, *D-W*. *W+* reflecting superior intelligence and intellectualization tendencies. Normals tend to produce at least one *W+* in his Rorschach protocol. *W+* are uncommon in severe depression. *W-* are index of maladjustment. *DW* responses are strong indicators of schizophrenia, which are devoted to confabulatory responses. Generally, *DW*, *W* are common in schizophrenics (Rapaport, Gill, & Schafer, 1980; Klopfer et al., 1956).

***D* responses**

These reflect one's interest in obvious and concrete (Rorschach, 1922/1975). Average range of *D* responses is between 45 to 55%. Chronic and deteriorated schizophrenics often show a marked underemphasis on *D*'s. Generally, *D*% tends to run low in some neurotics including those suffering from anxiety and depression (Rapaport, Gill, & Schafer, 1980).

***Dd* responses**

Dd+S or rare detail responses have been defined less than 10% in the normals (Klopfer & Davidson, 1962). These responses indicate one's ability to see and perceive unusual details. A moderate average of *Dd+S* responses indicates ego strength. Concentration of rare detail or *Dd* responses in a Rorschach protocol implies that ideational symptoms are prominent. *Dd* scores are more prominent in obsessive-compulsives, mixed neurotics and other schizophrenics. Its trend is low in depressive psychotics, depressive neurotics and simple schizophrenics. However, *Dd* responses have been found in the records of normals showing strong anxiety (Rapaport, Gill, & Schafer, 1980).

***d* Responses**

Small usual detail or *d* responses indicate certainty and accuracy in the normals and insecurity in the clinical groups. The normal expectancy of *d* is 4-15% (Klopfer & Davidson, 1962).

***S* responses**

White space or *S* responses indicate the projections of a person given to the white background rather than to the figure of the inkblot. These scores are indicative of the presence of some kind of oppositional tendencies in the subjects. Persons who give *Dd* in great number tend to give more *S* responses. *S* with *M* responses tend to indicate that oppositional tendency is directed towards outside which is a sign of stubbornness. Generally, greater *S* responses occur in the paranoid conditions. High number of *S* indicates possible paranoid tendencies (Rapaport, Gill, & Schafer, 1980 ; Schafer, 1954).

***F* responses**

Form determined responses or *F* are the indicator of degree of intellectual control and evidence of ego strength. Responses are chosen by the contour or articulations of the area (Klopfer & Davidson, 1962). In every record *F* is almost used by more than other determinants. High *F*% in the records is the sign of rigidity, compulsiveness and extreme inhibition. Mostly, high *F*% is found in the records of depressives, while, schizophrenics have good contrast of *F+* and *F-* in their protocols. In the protocols of deteriorating schizophrenics *F-*% is greater, whereas, the greater number of vague *F* are the signs of anxiety often found in all diagnostic groups. Vague *F* are also the indicator of anxiously inhibited schizophrenics (Schafer, 1954). *F+* responses relates to the quality of form, accuracy of perception; the higher form accuracy the more the individual is concerned with exactness and with reality (Klopfer & Davidson, 1962). *F+* % indicates the clarity of associative process (Rorschach, 1922/1975) and mostly *F+* % are either lower or absent in clinical groups.

***M* Responses**

These category of responses indicate perception of human movement on inkblot. These responses indicate subject's inclination toward achievement in culture and thought. In general, the greater *M* is found in the records of persons having ideational symptoms like in acute schizophrenics and in the records of obsessive-compulsives. Greater *M* are also generally found in the records of hysterics (Rapaport, Gill, & Schafer, 1980 ; Klopfer et al., 1956 ; Schafer, 1954).

(*M*-) and (*M*-)... *Hd* Responses

Human movement minus or (*M*-) responses are taken as an important indicator of schizophrenia or major depression. Generally (*M*-) responses reflect weak and disjointed relationship which are major feature of schizophrenia (Archer & Gorden, 1987). Another diagnostic category is (*M*-)...*Hd* or human movement minus related with human details. This category is related with the thought disorder, impaired perceptual accuracy, and poor interpersonal relationship, which are typical personality features of schizophrenics.

Weak *FLR* Responses

Weak form level (weak *FLR*) is related to the distortion of perception which is also related with impaired perceptual accuracy. Weak *FLR* are common in most of the protocols of schizophrenics (Archer & Gorden, 1987).

***C* Responses**

Pure colour or *C* responses generally reflect emotionality of uncontrolled nature as

found in the protocols of schizophrenics. Pure *C* responses have special relevance as diagnostic variable (Archer & Gorden, 1987). Those responses which are given to the colour areas of the blot other than black, grey and white. Colour responses reveal subject's prevailing mode of effective expression and responsiveness, the control of impulses and action, extravert and introvert tendencies.

Sum C Responses

SumC reflects the degree of overt reactivity to outer stimulation. Normal reactivity to emotional stimuli seems to require that *SumC* be at least three. Less than three *SumC* indicates too little responsiveness to emotional influences (Klopfer & Davidson, 1962). *SumC* score is found in great number in schizophrenics as compared to paranoids. In depressives these are rare, because of the inhibition of affective output, while in neurotics and hysterics its occurrence is high because of their emotional liability (Rapaport, Gill, & Schafer, 1980 ; Klopfer et al., 1956 ; Schafer, 1954).

FC Responses

These responses are integration of colour into a concept of definite form. *FC* responses reflect controlled but ready responsiveness to emotional stimuli. Highest *FC* responses are found among neurotics, in obsessive-compulsives and mixed neurotics. Cut off point for *FC* responses is defined as less the 2 (Viglione, Brager, & Haller, 1988).

C Responses

These are completely colour determined responses ignoring the form considerations

of the blot. These are higher in unclassified schizophrenics and hysterics. Unclassified schizophrenics are generally characterized by loosening of control, impulse effects and bizarre behaviour. Increase in *C* indicates increase in impulsiveness and poor control of affect. The highest incidence of pure *C* (*C*) is found in schizophrenics and pre-schizophrenics. In the neurotics pure *C* are almost entirely limited. Depressives see more often blood on card II and card III, while normals and neurotics give more *C* and *FC* responses on their cards (Rapaport, Gill, & Schafer, 1980 ; Klopfer et al., 1956 ; Schafer, 1954).

Experience Balance- *M:SumC*

Klopfer and Davidson (1962) explain this balance as ..."it distinguishes between people who are predominantly prompted from within (introverts) and people who are predominantly prompted stimulated from without (extraverts)"(p.142). Lowest incidence of both movement and colour is extremely inhibitory specifically in the depressives. The sum *M* and sum *C* equal or greater than *C* represents dilation which is found more in over ideational most productive and most labile over ideational schizophrenics (Rapaport, Gill, & Schafer, 1980). For experience balance the criterion of $R < L$ of *EB* has been defined by Viglione, Brager and Haller (1988).

The prevalence of *M* occurs in acute schizophrenics, obsessive-compulsives and related groups. Colour prevalence, is a strong indicator of the presence of schizophrenic psychopathology. Pure colour responses are very rare in the records of depressives, normals and hysterics (Schafer, 1954). Clinically, when sum *C* is lower than the sum *M*, it is an indication of the fact that affective out put and vigorous actions are restricted. When sum *C* exceeds sum *M*, it emphasises (rather) a pathologically increased affective

output and display. Greater sum C is usually an indicator of poor control of impulses and action (Klopfer et al., 1956).

C',K, k Responses

These type of responses are given to the shading, texture or vista qualities of the blot. These responses indicate individual's ways of handling his needs for affection and belongings and obtaining satisfying contacts. Clinically, shading is least useful as a definite diagnosis of the patient. However, it gives some indication of a person's anxieties. Some connections have been found between shading and anxiety. In the anxious persons the articulating and integrating abilities are impaired, thus, they may choose edge or tiny details (Rapaport, Gill, & Schafer, 1980). Generally, shading responses occur on the most unarticulated blots in the series on cards IV and VI. Lowest incidence of shading occurs on cards III and V. Absence of shading responses is even more important diagnostic criterion and it is not found in acute schizophrenics. On the other hand, paranoid schizophrenics give more inclination to these shading responses which is most important clinical sign of schizophrenia. In general, when anxiety is absent shading responses are likely to be not prevalent. Responsiveness to non colour area of the blot or *C'* is taken as an important indicator of depression (Viglione, Brager, & Haller, 1988).

Content of the Responses

The content scores reveal the breath and the nature of subject's ideas. Wide range of content goes with good intelligence. In general, wealth or stereotypy of the subject's responses corresponds to the wealth or stereotypy of his every day thinking. In clinical records variability of contents may be a reflection of a specific maladjustment rather than

of a general wealth of the associative processes.

Stereotype Responses on Rorschach

These type of responses are indicator of conformity in the normal subjects and indicator of inhibition and anxiety in the clinical groups. Normal adjusted individuals in order to conform with the group give these responses. Anxiety also restricts the associative contents of the individual and one tends to give more stereotype responses. Native limitation of intelligence may also impair the content of responses. Extreme inhibition, depressive psychosis, psychotic blocking also lead to these type of responses. The presence of strong preoccupations may also lead to the variety of content or content range (Exner, 1978).

A Responses

Normals around 30 years give 40% of the responses in this conceptual realm. Increase in this range has been considered as an indicator of stereotype or of monotony and colourlessness of the associational processes. In clinical settings high *A*% is related with less intelligence, inhibition, compulsive rigidity or depression. High number of *A*% is found in the records of obsessive-compulsive maladjusted persons (Klopfer et al., 1954).

At Responses

These type of responses involve perception of either human or animal anatomy. Anatomy responses indicate feeling of intellectual inadequacy, body preoccupation,

generalized anxiety or extreme blocking. Distinction is also made in terms of skeletal or visceral anatomy. The former refers to the blocking and rigidity and the latter to disguised sexual or aggressive connotations. More than two *At* responses carry pathological weight in abnormals and are regarded as symbol of maladjustment in normals (Klopfer & Davidson, 1962; Exner, 1974). The anatomy responses are entirely vague or arbitrary in form, having generally *F+* or *F-*. However, there are few exceptions such as: i) on card III the upper red area is seen as stomach and oesophagus; ii) on card VIII upper middle white area is seen as ribs; iii) on card X upper middle grey area is seen as trachea and lungs. Generally, these three type of anatomy responses are scored as *F+* if they are given by other than a medical man.

***H* Responses**

Human responses involve the percept of whole human figure. *Human* responses indicate relation with human beings. A lack of *H* shows poor interpersonal relations and poor adjustment. Facial expressions, expressive movements and postures of human figure often appear to be expressive of a subject's own conception of himself. Bending down of human figures reflect a self-conception of person weighted down by his problems and shrinking from others. The upward or outward stretching figures reflect a self-conception of ambitiousness or uprising against one's burden of active and aggressive coping with life's problems (Klopfer et al., 1956). Scared or ferocious facial expressions reflect one's own projection of inner feelings. Such signs are prominent in hysterical patients.

***Obj* Responses**

These responses involve all man made objects. Object responses are either very sharp

and well articulated or absurd. Object responses are most frequent in compulsive adjustments and in psychotic conditions (Klopfer & Davidson, 1962).

Arch Responses

These responses are related with architectural objects including buildings or castles. These type of responses are very rare and are either very sharp or absurd. Occurrence of these responses in women shows striving for ambition/achievement (Klopfer & Davidson, 1962). Castle on Card II (upper top) and the Eiffel Tower in the upper middle grey area of card X are its common examples.

Pl Responses

These responses involve percepts of landscapes or seascapes as trees or bunch of shrubs. These responses are less frequent in the Western norms as compared to other cultures. Cultural factors do come in. The Japanese norms of Rorschach (Akitani, 1987) show that subject responding to lower middle area of Card VIII report a bunch of flower. It is more frequent in children than in adults and in women than in men. Vague plant responses show also the sensitivity and uncontrolled use of colour.

Cl and Smo Responses

These type of responses include contents with unspecified forms like clouds or smoke. Presence of these responses mostly refer to the prevalence of anxiety in usually-free-floating form (Rorschach, 1922/1975).

Bl Responses

It refers to pure colour responses of blood either human or animal. Exceeding tension or aggression is expected in an average well adjusted person. Aggression is most strongly indicated when blood is seen on some human or animal form. If pure *C* response occurs more than *M* on Card II and III it indicates a pathological lack of control (Klopfers & Davidson, 1962).

Sex Responses

It refers to the responses including human or animal forms in sexual actions or perception of sexual organs of any of these. These type of responses are generally indicator of pathology, although, they may appear in the records of uninhibited professional or a psychologically sophisticated person. *Sex* responses are more frequent in the records of psychopaths and are absent in the records of normals. *Sex* responses occurring in a neurotic context most often refer to sexual preoccupations of a person (Klopfers & Davidson, 1962).

Affective Ratio (Afr)

Affective ratio is the sum of last three cards (VIII+IX+X) divided by the sum of remaining cards (I-VII). *Afr* is taken as general responsiveness to emotional stimuli in the environment. *Afr* is derived from this formula: $SUM R VIII+IX+X / SUM R (I-VII)$. *Afr* is expected to be low in clinical groups, especially, in psychotic depressive (Viglione, Brager, & Haller, 1988)

Ego-centricity Index (*EC*)

This index includes reflection and pair responses. Reflection (*r*) answers are based on the percepts which are related with the symmetry of the blot. This category is being reported in Exner and Weiner's system (1982). Subjects who are highly ego-centric or self-focusing tend to give more reflection responses than do subjects who are not highly ego-centric (Exner & Weiner, 1982). Numerous studies have been conducted to validate the ego-centricity index (Exner & Weiner, 1982). Pair responses are denoted as (2), an Arabic numeric within parenthesis. These responses occur with considerable frequency in every record. The pair frequency increases significantly in more ego-centric subjects and almost non-existent in the subjects who have little regard for themselves. Some researchers (Exner, 1974; Beck, 1961 & Klopfer et al., 1956) have suggested that reflection can be scored as a type of vista answer. The most common feature that appears in the Rorschach structural data among depressives is a low ego-centricity index. It is important to note that in suicidal patients a high ego-centricity index is found. Both high and low *r* seems to indicate problems in self-focusing and self-evaluation (Exner, 1982). *EC* score is derived from this formula: $3r + (2)/R$. Viglione, Brager and Haller (1988) have defined a cut off point of *EC* less than 0.3 in psychotic depressives.

Morbid Contents (*MOR*)

Morbid contents are taken as an important clue of presence of depression. This response category is related with the percepts of dead, destroyed, injured or broken objects or human beings. This content category is only found in Exner's (1974) system. These content scores are taken as an indicator of depression (Exner & Makin, 1980). Some efforts have also been made to use morbid contents as suicidal indicators (White

& Schriber, 1952; Sakheim, 1955; Thomes, Ross, Brown & Duszuski, 1973). Criterion of identification of morbid content scores defined by Exner and Weiner (1982) is as follows:

- 1) identification of objects as being dead or destroyed;
- 2) identification of objects as being injured;
- 3) attribution of a clearly depressive feeling or characteristics to an object.

Cof and Cont Responses

Contamination responses have special diagnostic value for the schizophrenics and often these are non prevalent in the normals (Exner, 1987). Confabulatory responses are typical of schizophrenics, which often reflect their poor perceptual accuracy (Exner, 1987).

STATEMENT OF PROBLEM

The present study aims at finding out the pattern of responses of psychotic depressives, normal females on Rorschach. The advantage of using Rorschach for clinical diagnosis also lies in its nonreactive nature and response emitting characteristic. The patients suffering from severe depression or catatonic schizophrenia may not be responsive to verbal tests used for clinical diagnosis. Rorschach could be of some help in such situations. Even limited number of responses having a specific pattern may be helpful in diagnosing the mental state of a patient.

In test-alien cultures and countries with low literacy rate, the development of verbal diagnostic tests and their norms may be a formidable task. The high prevalence rate of

mental illness among socially and economically deprived classes, who are either illiterate or low in education, may not favour the use of verbal tests for diagnostic purposes. The problem of diagnosis of mental illness becomes further aggravated when one considers the different socio-cultural backgrounds of the patients and their specific reporting styles of the problems. In the absence of valid diagnostic criterion, a specific reporting style of a patient may interact with the idiosyncratic diagnostic approach of a clinician and his personal experience leading towards erroneous judgement. The use of Rorschach having valid diagnostic indicator offers a solution to the problem of clinical differential diagnosis in our socio-cultural context. The first step in this direction, however, is to ascertain the reliability and validity of Rorschach as a clinical diagnostic instrument.

As far as response patterns of schizophrenics and psychotic depressives are concerned, it would be interesting and informative to know whether the pattern of responses of Pakistani schizophrenics and psychotic depressives exhibit the general response patterns found in the studies discussed above or they show some unique patterns characteristic of Pakistani culture and society. This would be a relevant question regarding the validity of pattern of responses on Rorschach to be used for diagnostic purpose cross-culturally.

Aims of the Study

The major aim of the study is to find out the distinctive pattern of responses of psychotic depressives, schizophrenics and normal females. Further, an effort is to made to determine the diagnostic validity of Rorschach by using these pattern of different clinical and normal female groups in order to classify the undiagnosed females into these categories.

CHAPTER III

DESIGN OF THE STUDY

The research consists of study 1 and study 2. Study 1 investigates the patterns of responses of diagnosed psychotic depressive, schizophrenic and normal females on Rorschach. In study 2 a comparison is to be made between the random samples of inpatient psychotic females in order to classify them into these categories. Study 1 is also aimed at establishing the inter-scorer reliability of Rorschach on major scoring categories by applying percentages of agreement and Kandell's *tau B*. Split-half reliability estimates will also be determined on Rorschach major scoring categories for study 1. The $k \times l$ *Chi-square* analyses among the patterns of responses of psychotic depressives, schizophrenics and normals in study 1 and $k \times l$ *Chi-square* analyses among the response patterns of psychotics depressives, schizophrenics and other inpatient psychotic females in study 2 will be conducted to determine the discriminant validity of Rorschach.

Responses of the samples of psychotic depressives, schizophrenics and normals (30 in each) will be scored on each of the Rorschach scoring category. These categories include Location, Determinant, Content, Popular-original and Form level. Summary table of the three samples is to be prepared which includes frequencies, ratios and percentages of the following basic relationships: total responses (R), total time (T), average time per response (T/R), average reaction time to achromatic cards (I, III, V, VII, IX), average reaction time to chromatic cards (II, IV, VI, VIII and X), percentages of form and form plus responses ($F\%$, $F+\%$), percentages of animal responses ($A\%$), ratio of human and animal responses and human and animal detail responses ($H+A$): ($Hd+Ad$), ratio of

human and animal responses ($H:A$), sum of colour responses ($FC+2C+3C/2$), ratio of human movement responses and $sumC$ ($M:SumC$), ratio of movement and sum of texture and achromatic responses ($FM+m$): ($Fc+c+C'$), percentage of total number of responses to last three coloured cards ($VIII+IX+X/R\%$), ratio of whole responses to movement responses ($W:M$). Besides, percentages of W, D, d, Dd, S will also be calculated. Ratios of human and animal movements ($FM:M$), ratio of animal movements and human movements ($M:FM + m$), ratio of textures and vista responses and form responses $FK + Fc: F$, achromatic and chromatic ratio ($Fc+c+c+C'+C'F+FC : FC+CF+C$) and ratio of form colour responses to colour form responses ($FC:CF+C$) will also be calculated. Besides making summary table of the three groups of psychotic depressives, schizophrenics and normals, the percentage, and mean of each scoring category for each group will also be calculated.

METHOD

Study 1

Sample

The sample consisted of 90 females, including 30 each diagnosed schizophrenics, psychotic depressives and normals. A representative sample of normal (*Nor*) females in the age range of 25-45 was taken from Rawalpindi city. The subjects of this sample (*Nor*) had reportedly never received any psychological or psychiatric treatment. The selection of psychotic depressives and schizophrenics in study 1 was based upon the diagnosis of the psychiatrists. The other criteria were:

1. subjects who did not have any history of organic pathology.

2. who were communicable.
3. whose shock-treatment was terminated at least one week before the testing.
4. who were between the age range of 25-45 years.

The data of study 1 was obtained from three provinces of Pakistan including Sindh, Punjab and N.W.F.P from the following hospitals:

Sindh

1. Jinnah-Post-Graduate Medical Centre, Karachi.
2. Edhi Apna Ghar, Sohrab Ghoat, Karachi.
3. Civil Hospital, Karachi.
4. Liaquat Hospital, Karachi.

Punjab

1. Mental Hospital, Lahore.
2. Rawalpindi General Hospital, Rawalpindi.
3. Mayo Hospital Lahore.

N.W.F.P

1. Mental Hospital, Peshawar.
2. Khyber Teaching Hospital, Peshawar.

Instrument

Rorschach test was used as the major instrument. In addition, a bio-data sheet (Appendix C) was given to the subjects to record the age, education and socio-economic

status.

Procedure

Rorschach was administered to the subjects including normals, psychotic depressives and schizophrenics individually following the standard testing situation. The normal subjects took approximately one and half hour, whereas, the psychotic depressives and schizophrenics took more time to complete the protocols. An average of four normal subjects were tested daily, whereas, the average for clinical subjects was three persons daily. The clinical subjects were tested in their hospitals. It was observed during the data collection, that the number of hospitalized female psychotics was much lesser than female schizophrenics. This situation affected the duration of data collection as the research design required an equal number of patients in both the categories. Moreover, it was very time consuming and required a lot of patience and endurance to collect data from psychotics on a sophisticated test like Rorschach. The development of rapport was of prime importance before actual testing, as one of the important source of information in Rorschach examination is said to be the relationship that exists between the subject and the tester. Following the standard procedures three factors were considered important in preparing subject for the test: (a) nature of the test atmosphere; (b) the seating arrangement of the subject and the examiner; (c) test equipment and the initial instructions to the subjects.

Subjects were given instructions as suggested by Klopfer and Davidson (1962) in their local language as follows:

"I am going to show you some pictures. People see all sort of things in these

pictures, I would like you to tell me what this might appear to you, what you see in these".

The procedure for test administration was adopted from Klopfer and Davidson (1962). Subjects were presented cards in consecutive order in upright position. All the verbatim was recorded in Urdu language, using researcher's own short hand script. Moreover, the reaction time, total time per card, and total time to complete the performance proper were also recorded. The inquiry was also conducted regarding further information of subject's responses based on Location, Determinant and Content categories of the inkblot. Subjects asked various confirming questions like " am I correct?" or " is it what you want?". The usual reply of the researcher to such questions was "tell me what it appears to you; there is no right or wrong answer". No prompting was given to the subjects to elicit their responses.

Scoring

Scoring procedure for Location and Determinant was mainly based upon Klopfer and Davidson's (1962) system. However, the deviation was made in terms of Form Level Rating, F responses were scored as F+ or F- which were adapted from Beck et al. (1961). The content categories were in part taken from Rorschach (1922/1975) and as described by Beck et al. (1961) and Klopfer and Davidson (1962). The scoring of Egocentricity Index, Morbid content and deviant verbalizations was done as suggested by Exner and Weiner (1982).

Analyses

Following analyses were carried out for the comparisons of three groups of psychotic

depressives, schizophrenics and normals:

- Pattern summary table of basic and supplementary relationship of three groups.
- Pattern scores of 69 scoring categories on frequencies, means, and percentages.
- ANOVA of three groups on all the scoring categories.
- Patterns of psychotic depressive females on distinguishing and critical scoring categories.
- Patterns of schizophrenic females on distinguishing and critical scoring categories.
- Pattern of normal females on distinguishing and critical categories.
- Pattern summary of psychotic depressive, schizophrenic and normal females.

RESULTS

Table 1 presents the patterns of psychotic depressive, schizophrenic and normal females on Rorschach in the form of a summary table. The groups have been compared on Rorschach's basic and supplementary relationships of location, determinant and content categories on frequencies, percentages and ratios. In order to make comparisons, actual frequencies and percentages have been converted into relative frequencies and percentages. These quantitative relationship were calculated following the Klopfer and

Davidson's system (1962).

Table 1 makes comparisons between psychotic depressives, schizophrenics and normals on frequencies and means of total responses (R) and total time (T). Comparisons are also made on these three groups on the averages of total time per response (T/R), reaction time to chromatic cards and average reaction time to achromatic cards. Table 1 also compares the percentages of Rorschach scores of three groups on form responses (F), form plus responses ($F+$), animal responses (A), whole responses (W), large usual detail responses (D), small usual detail responses (d), human movement responses (M) and rare detail responses ($Dd+S$). Table 1 also provides comparisons of Rorschach scores of three groups on the ratios of the sum of human plus animal responses and human plus animal detail responses ($H+A$): ($Hd+Ad$) and human movement responses and SumC ($M: sumC$) responses, inanimate movement responses and sum of texture and achromatic responses ($Fm+m: Fc+c+C'$), whole and human movement responses ($W:M$), human movement responses and animal movement responses ($M: FM$), whole and large usual detail responses ($W: D$), human movement responses and sum of animal and inanimate movement responses ($M: FM+m$), sum of shading texture and form responses ($FK+Fc:F$), sum of all texture, achromatic colour responses and sum of colour responses ($Fc+cF+c+C'+C'F+FC': FC+CF+C$), form colour responses and sum of colour form and colour responses ($FC: CF+C$), and reaction time of chromatic and achromatic cards ($Ach: Cho$). Besides, Table 1 also gives the comparison of three groups on ratios of plus and minus form level ratings ($FLR+: FLR-$). The three groups are also compared on sum of colour responses ($SumC$) and relative ratios of popular and original ($Pop : Ori$) responses.

Table 1

Summary Table of the Basic and Supplementary Relationship of Rorschach's Scores of Psychotic Depressive, Schizophrenic and Normal Females.

	Psychotic Depressives <i>N</i> = 30	Schizophrenics <i>N</i> = 30	Normals <i>N</i> = 30
Total Responses (<i>R</i>)	353	372	1188
Total Time (<i>T</i>) [in seconds]	18352"	19099"	31627"
Average Time Per Response (<i>T/R</i>) [in seconds]	52"	51"	26"
Average Reaction Time to Achromatic cards [in seconds]	25"	28"	13"
Average Reaction Time to Chromatic cards [in seconds]	33"	25"	13"
<i>T.T</i> Mean	74.48	62.00	57.26
<i>R.T</i> Mean	19.99	29.20	17.71
$\frac{(F+ F+ F-)}{R} \times 10$	29(51)*	34(60)	36(63)
<i>F+</i> %	22	25	54
$\frac{FK + F + Fc}{R} \%$	28(53)	33(62)	39(72)
$\frac{(A + Ad)}{R}$	30(33)	30(33)	38(42)
<i>(H + A) : (Hd + Ad)</i>	7 : 1 (125:19)	5 : 1 (165:34)	1 : 1 (392:270)
<i>H:A (H+Hd:A+Ad)</i>	1:4 (30:114)	1:2 (75:124)	1:3 (160:502)
<i>W</i> %	33	34	24
<i>D</i> %	44	51	55
<i>d</i> %	4	5	9

Cont... Table 1.

$M\%$	3	4	7
$Dd+S\%$	16	7	12
$Sum (FC+2CF +3C)$ ----- 2	26	31	100
$M : SumC$	1:3 (10:26)	1:2 (17:31)	1:1 (91:100)
$Fm + m: Fc + c + C'$	0:24	10:21	24:47
$W:M$	12:1 (117:10)	7:1 (126:17)	3:1 (286:91)
$FM:M$	2:1 (17:10)	2:1 (31:17)	0.8:1 (77:91)
$W:D$	1:1 (117:156)	1:1 (126:190)	1:2 (286:655)
$M: (FM + m)$	1:2 (10:17)	1:2 (17:41)	1:1 (91:101)
$FK + Fc : F$	1:10 (17:181)	1:45 (5:225)	1:40 (19:759)
$(Fc+cF+c+C'+C'F+FC'):$ $(FC+CF+C)$	1:1 (24:32)	1:3 (12:30)	1:7 (13:87)
$FC : CF + C$	1:0.7 (19:13)	1:6 (3:18)	1:1 (39:48)
$VIII + IX + X \%$ ----- R	27	31	34
$R.T$ $Ach:Cho$	25.39:33.18	28.26:25.43	11.82 : 12.1
$FLR+ :FLR-$	0.2:1 (67:286)	0.5:1 (125:247)	2:1 (835:353)
$Pop:Ori$	1:4 (67:286)	1:4 (71:301)	1:5 (185:1003)

*Actual frequencies are in parentheses

Table 2 presents the patterns of all the 69 categories of Rorschach of psychotic depressives, schizophrenics and normals on frequencies, percentages and means. The patterns of three groups on these scoring categories presented in table 2 set up a frame of reference showing how much of any test variable is to be expected in any of these groups.

Table 2 also makes the comparisons of three groups on total number of responses (R) and positive total number of responses ($F+$). Table 2 includes fifteen location scores including whole responses (W), cut-off whole responses ($W1$), forced whole responses ($d-W$), confabulatory responses (DW), Sum W 's ($W+W1+DW$), whole minus ($W-$), large usual detail responses (D), small usual detail responses (d), tiny detail responses (dd), edge detail responses (de), inside detail responses (de), rare detail responses (dr), total score of all rare detail responses (Dd), white space responses (S) and Sum of rare detail and white space responses ($Dd+S$).

Comparisons of three groups on twenty four Rorschach determinant scores is given in Table 2 which includes form plus responses ($F+$), form minus responses ($F-$), sum of form responses ($F-, F+$) human movement responses (M), animal movement responses (FM), inanimate movement responses (Fm/mF & m), sum of m responses ($Fm/mF+m$), colour responses ($FC, C, F/C$ & $C/F, & CF$), achromatic colour responses ($FC'/C'F$ & C'), sum of achromatic responses ($C'+FC'/C'F$) texture responses (Fc/cF & c), sum of texture responses ($c+cF/Fc$), vista responses (FK, KF & K), shading responses (Fk/kF & k) sum of shading responses ($k+kF/+Fk$) and for determinant scores.

Table 2 also presents the comparison of three groups on scores of thirty content categories. These include human and animal responses (H,A), human and animal detail

responses (*Hd,Ad*), animal object responses (*A obj*), human anatomy and animal anatomy (*A & A At*), object (*Obj*), nature (*N*), geography responses (*Geo*), sexual responses (*Sex*), eruption responses (*Eru*), plant responses (*Pl*), blood responses (*Bl*), reflection responses (*rF & r*), mask responses (*MSK*), pair responses [*(2)*], x-ray responses (*X-ray*), fire responses (*Fi*), colour responses (*Col*), architectural responses (*Arch*), super human responses [*(H)*], flag responses (*Fl*), art responses (*Art*), morbid content responses including human depression (*H dep*), decay (*dec*) depression (*Dep*) sum of morbid responses (*MOR Sum*) and contamination (*Cont*) responses.

Table 2

Frequencies, Percentages and Means of the Three Groups of Psychotic Depressive, Schizophrenic and Normal Females on Rorschach Scoring Categories.

	Psychotic Depressives <i>N</i> = 30			Schizophrenics <i>N</i> = 30			Normals <i>N</i> = 30		
	Freq.	%	M	Freq.	%	M	Freq.	%	M
<i>R</i>	353	11.76		372	12.40		1188	40.00	
<i>R+</i>	126	35.69		125	33.60		835	70.28	
Location Scores									
<i>W</i>	113	32.01	3.77	120	32.25	4.00	258	21.77	8.60
<i>W</i>	1	0.28	0.03	-	-	-	26	2.18	0.86
<i>DW</i>	3	0.84	0.10	6	1.61	0.20	2	0.16	0.07
<i>W</i> 's (<i>W</i> + <i>W</i> + <i>DW</i>)	117	33.14	3.87	126	33.87	4.20	286	24.07	9.53
<i>W</i> -	79	22.37	2.63	72	19.35	2.40	30	2.52	1.00
<i>d</i> - <i>W</i>	10	2.83	0.33	12	3.22	0.40	-	-	-
<i>D</i>	156	44.20	5.20	190	51.07	6.33	655	55.13	21.83
<i>d</i>	15	4.24	0.50	19	5.10	0.63	105	8.83	3.50
<i>dd</i>	2	0.56	0.07	-	-	-	34	2.86	1.13
<i>de</i>	3	0.84	0.10	6	1.61	0.20	11	0.92	0.36
<i>di</i>	18	5.09	0.60	12	3.22	0.40	29	2.44	0.96
<i>dr</i>	15	4.24	0.50	6	1.61	0.20	34	2.86	1.13
<i>Dd</i>	38	10.76	1.27	24	6.45	0.80	108	9.09	3.60
<i>S</i>	17	4.81	0.57	1	0.26	0.03	34	2.86	1.13
<i>Dd</i> + <i>S</i>	55	15.58	1.83	25	6.72	0.83	142	11.95	4.73

	Psychotic Depressives <i>N</i> = 30			Schizophrenics <i>N</i> = 30			Normals <i>N</i> = 30		
	Freq.	%	M	Freq.	%	M	Freq.	%	M
Determinant Scores									
<i>F+</i>	79	22.40	2.63	94	25.26	3.10	640	53.87	21.33
<i>F-</i>	102	28.89	3.47	131	35.21	4.37	119	10.01	3.47
<i>F Sum</i> (<i>F+</i> , <i>F-</i>)	181	51.27	6.03	225	60.48	7.50	759	63.88	25.30
<i>M</i>	10	2.83	0.33	17	4.56	0.57	91	7.65	3.03
<i>FM</i>	17	4.81	0.57	31	8.33	1.03	77	6.48	2.57
<i>Fm/mF</i>	-	-	-	3	0.80	0.10	5	0.42	0.17
<i>m</i>	-	-	-	7	1.88	0.23	19	1.59	0.63
<i>m Sum</i> (<i>Fm+m</i>)	-	-	-	10	3.0	0.33	24	2.0	0.80
<i>FC</i>	19	5.40	0.63	3	0.80	0.10	39	3.28	1.30
<i>C</i>	6	1.69	0.20	13	3.49	0.43	43	3.61	1.43
<i>F/C, C/F</i>	3	0.84	0.10	7	1.88	0.23	28	2.35	0.43
<i>FC'/C'F</i>	48	13.59	1.60	15	4.03	0.50	27	2.27	0.90
<i>C'</i>	22	6.23	0.73	10	2.68	0.33	10	0.84	0.33
<i>C' Sum</i> (<i>C'+FC'/C'F</i>)	70	19.83	2.33	25	6.72	0.83	37	3.11	1.23
<i>CF</i>	7	1.98	0.23	5	1.34	0.17	5	0.42	0.17
<i>Fc/cF</i>	2	0.56	0.07	2	0.53	0.07	37	3.11	1.23
<i>c</i>	-	-	-	9	2.41	0.30	-	-	-
<i>c Sum</i> (<i>c+Fc/cF</i>)	2	0.56	0.07	11	0.02	0.36	37	3.11	1.23

Cont... Table 2.

	Psychotic Depressives			Schizophrenics			Normals		
	<i>Freq.</i>	<i>%</i>	<i>M</i>	<i>Freq.</i>	<i>%</i>	<i>M</i>	<i>Freq.</i>	<i>%</i>	<i>M</i>
<i>FK</i>	15	4.24	0.50	3	0.80	0.10	8	0.67	0.27
<i>KF</i>	3	0.84	0.10	4	1.07	0.13	11	0.92	0.37
<i>K</i>	1	0.28	0.03	1	0.26	0.03	25	2.10	0.83
<i>Fk/kF</i>	18	5.09	0.60	5	1.34	0.17	2	0.16	0.07
<i>k</i>	1	0.28	0.03	12	3.22	0.40	2	0.16	0.07
<i>k Sum</i> (<i>k+kF/Fk</i>)	19	5.38	0.63	17	4.56	0.56	4	0.33	0.13
Content Scores									
<i>H</i>	17	4.81	0.57	52	13.97	1.73	67	5.63	2.23
<i>Hd</i>	13	3.68	0.43	23	6.18	0.76	93	7.82	3.10
<i>A</i>	108	30.59	3.60	113	30.37	3.76	325	27.35	10.83
<i>Ad</i>	6	1.69	0.20	11	2.95	0.36	177	14.89	5.90
<i>A obj</i>	10	2.83	0.33	12	3.22	0.40	10	0.84	0.33
<i>At</i>	31	8.78	1.03	17	4.56	0.57	131	11.02	4.37
<i>A At</i>	5	1.41	0.17	3	0.80	0.10	2	0.16	0.07
<i>Obj</i>	15	4.24	0.50	25	6.72	0.83	82	6.90	2.73
<i>N</i>	19	5.38	0.63	14	3.76	0.47	94	7.91	3.13
<i>Geo</i>	6	1.69	0.20	5	1.34	0.17	5	0.42	0.17
<i>Sex</i>	32	9.06	1.07	14	3.76	0.47	22	1.85	0.73
<i>Eru</i>	2	0.56	0.07	1	0.26	0.03	6	0.50	0.20
<i>Pl</i>	17	4.81	0.57	14	3.76	0.47	51	4.29	1.70
<i>Bl</i>	3	0.84	0.10	4	1.07	0.13	22	1.85	0.73

Cont... Table 2.

<i>rf</i>	4	1.13	0.13	16	4.30	0.53	13	1.09	0.43
<i>r</i>	2	0.56	0.06	5	1.34	0.17	22	1.85	0.73
<i>MSK</i>	-	-	-	-	-	-	1	0.08	0.03
(2)	1	0.28	0.03	-	-	-	-	-	-
<i>X-ray</i>	9	2.54	0.30	2	0.53	0.06	3	0.25	0.10
<i>Fi</i>	4	1.13	0.13	1	0.26	0.03	4	0.33	0.13
<i>Col</i>	12	3.39	0.40	8	2.15	0.27	26	2.18	0.86
<i>Arch</i>	4	1.13	0.13	4	1.07	0.13	8	0.67	0.26
(<i>H</i>)	9	2.54	0.30	17	4.56	0.57	13	1.09	0.43
<i>Fl</i>	-	-	-	3	0.80	0.10	11	0.92	0.36
<i>Art</i>	5	1.41	0.17	3	0.80	0.10	-	-	-
<i>MOR:</i>									
<i>H dep</i>	5	1.41	0.17	-	-	-	-	-	-
<i>dec</i>	9	2.54	0.30	4	1.07	0.13	-	-	-
<i>Dep</i>	5	1.41	0.17	1	0.26	0.03	-	-	-
<i>MOR_{sum}19</i>	19	5.40	0.63	5	1.34	0.16	-	-	-
<i>Cont</i>	8	2.26	0.26	16	4.30	0.53	3	0.25	0.10

Tables 3-44 present one way between group analysis of variance of Rorschach scoring categories. Tables 3-10 give one way between group analysis of variance on location scores including whole responses (*W*), large usual detail responses (*D*), confabulatory responses (*DW*), small usual detail responses (*d*), edge detail responses (*de*), inside detail responses (*di*), rare detail responses (*dr*), white space responses (*S*).

Tables 11-24 give one way between group analysis variance of determinant scores including form plus responses (*F+*), human movement responses (*M*), animal movement

responses (*FM*), form texture and texture form responses (*Fc/ cF*), vista responses (*FK*), vista form responses (*KF*), from vista responses (*K*), shading responses (*Fk, kF*), colour responses (*C*), form colour responses (*FC*), colour form responses (*CF*), arbitrary form colour responses (*C/F, F/C*), achromatic colour responses (*C'*), achromatic colour form responses (*FC', C'F*).

Tables 25-44 give one way between group analysis of variance of content scores including human responses (*H*), human detail responses (*Hd*), animal responses (*A*), animal detail responses (*Ad*), anatomy responses (*At*), animal anatomy responses (*A At*), object responses (*Obj*), nature responses (*N*), geography responses (*Geo*), sexual responses (*Sex*), eruption responses (*Eru*), plant responses (*Pl*), blood responses (*Bl*), reflection form responses (*rF*), reflection responses (*r*), x-ray responses (*X-ray*), fire responses (*Fi*), colour responses (*Col*), architectural responses (*Arch*) and super natural figure responses (*[H]*).

ONE WAY ANALYSIS OF VARIANCE ON LOCATION SCORES

Table 3

One Way Analysis of Variance on Whole Responses (W) of Rorschach of Psychotic Depressive, Schizophrenic and Normal Females.

Source of Variance	SS	df	MS	F	p
Group	445.756	2	222.878	30.176	.0001
Residual	642.567	87	7.386	-	-
Total:	1088.322	89	12.228	-	-

The results in Table 3 indicate a highly significant difference, $F(2,87) = 30.2$, $p < .0001$, between three groups on Whole (*W*) responses of Rorschach.

Table 4

One Way Analysis of Variance on Large Usual Details (D) of Rorschach of Psychotic Depressive, Schizophrenic and Normal Females.

Source of Variance	SS	df	MS	F	P
Group	5182.22	2	2591.001	94.017	.0001
Residual	2397.633	87	27.559	-	-
Total:	7579.656	89	85.165	-	-

Table 4 indicates a highly significant difference, $F(2,87) = 94.1, p < .0001$, between three groups on Large Usual Detail (D) responses of Rorschach.

Table 5

One Way Analysis of Variance on Confabulatory Whole Responses (DW) of Rorschach of Psychotic Depressive, Schizophrenic and Normal Females.

Source of Variance	SS	df	MS	F	p
Group	.267	2	.133	.821	.443
Residual	14.133	87	.162	-	-
Total:	14.400	89	.162	-	-

The results in Table 5 indicate that there is no significant difference, $F(2, 87) = .821, p < .443$, between three groups on Confabulatory whole (DW) responses of Rorschach.

Table 6

One Way Analysis of Variance on Small Usual Detail Responses (d) of Rorschach of Psychotic Depressive, Schizophrenic and Normal Females.

Source of Variance	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Group	172.356	2	86.178	29.756	.0001
Residual	251.967	87	2.896	-	-
Total:	424.322	89	4.768	-	-

Table 6 indicates a highly significant difference, $F(2, 87) = 29.7, p < .0001$, between three groups on Small Usual Detail (*d*) responses of Rorschach.

Table 7

One Way Analysis of Variance on Edge Detail Responses (de) of Rorschach of Psychotic Depressive, Schizophrenic and Normal Females.

Source of Variance	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Group	1.089	2	.544	1.936	.150
Residual	24.467	87	.281	-	-
Total:	25.556	89	.287	-	-

Table 7 indicates that there is no significant difference, $F(2,87) = 1.9, p < .150$, between three groups on Edge Detail (*de*) responses of Rorschach.

Table 8

One Way Analysis of Variance on Inside Detail Responses (di) of Rorschach of Psychotic Depressive, Schizophrenic and Normal Females.

Source of Variance	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Group	4.956	2	2.478	3.200	.046
Residual	67.367	87	.774	-	-
Total:	72.322	89	.813	-	-

The results in Table 8 indicate a significant difference, $F(2,87) = 3.2, p < .046$, between three groups on Inside Detail (*di*) responses of Rorschach.

Table 9

One Way Analysis of Variance on Rare Detail Responses (dr) of Rorschach of Psychotic Depressive, Schizophrenic and Normal Females.

Source of Variance	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P</i>
Group	13.622	2	6.811	4.712	.01
Residual	125.767	87	1.446	-	-
Total:	139.389	89	1.566	-	-

Table 9 indicates a significant difference, $F(2,87) = 4.7, p < .01$, between three groups on Rare Detail (*dr*) responses of Rorschach.

Table 10

One Way Analysis of Variance on White Space Responses (S) of Rorschach of Psychotic Depressive, Schizophrenic and Normal Females.

Source of Variance	SS	df	MS	F	p
Group	18.156	2	9.078	11.000	.0001
Residual	71.800	87	.825	-	-
Total:	89.956	89	1.011	-	-

Table 10 indicates a highly significant difference, $F(2,87) = 11.0$, $p < .0001$, between three groups on White Space (S) responses of Rorschach.

ONE WAY ANALYSIS OF VARIANCE ON DETERMINANT SCORES

Table 11

One Way Analysis of Variance on Form Plus Responses (F+) of Rorschach of Psychotic Depressive, Schizophrenic and Normal Females.

Source of Variance	SS	df	MS	F	p
Group	182.022	2	91.011	55.011	.0001
Residual	143.933	87	1.654	-	-
Total:	325.956	89	3.662	-	-

The results in Table 11 indicate a highly significant difference, $F(2,87) = 55.0$, $p < .0001$, between three groups on Form Plus (F+) responses of Rorschach.

Table 12

One Way Analysis of Variance on Human Movement Responses (M) of Rorschach of Psychotic Depressive, Schizophrenic and Normal Females.

Source of Variance	SS	df	MS	F	p
Group	90.422	2	45.211	18.261	.0001
Residual	215.400	87	2.476	-	-
Total:	305.822	89	3.436	-	-

Table 12 indicates a highly significant difference, $F(2,87) = 18.3, p < .0001$, between three groups on Human Movement (M) responses of Rorschach.

Table 13

One Way Analysis of Variance on Animal Movement Responses (FM) of Rorschach of Psychotic Depressive, Schizophrenic and Normal Females.

Source of Variance	SS	df	MS	F	p
Group	11.289	2	5.644	6.591	.002
Residual	74.500	87	.856	-	-
Total:	85.789	89	.964	-	-

The results in Table 13 indicate a highly significant difference, $F(2,87) = 6.6, p < .002$, between three groups on Animal Movement (FM) responses of Rorschach.

Table 14

One Way Analysis of Variance on Form Texture Responses and Texture Form Responses (Fc / cF) of Rorschach of Psychotic Depressive, Schizophrenic and Normal Females.

Source of Variance	SS	df	MS	F	p
Group	.089	2	.044	1.036	.359
Residual	3.733	87	.043	-	-
Total:	3.822	89	.043	-	-

Table 14 indicates that there is no significant difference, $F(2,87) = 1.0$, $p < .359$, between three groups on Form Texture and Texture Form Responses (Fc / cF) of Rorschach.

Table 15

One Way Analysis of Variance on Form Vista Responses (FK) of Rorschach Psychotic Depressive, Schizophrenic and Normal Females.

Source of Variance	SS	df	MS	F	p
Group	2.489	2	1.244	2.630	.078
Residual	41.167	87	.473	-	-
Total:	43.656	89	.491	-	-

The results in Table 15 indicate that there is no significant difference, $F(2,87) = 2.6$, $p < .078$, between three groups on Form Vista Responses (FK) of Rorschach.

Table 22

One Way Analysis of Variance on Forced Form Colour Responses and Forced Colour Form Responses (F/C / C/F) of Rorschach of Psychotic Depressive, Schizophrenic and Normal Females.

Source of Variance	SS	df	MS	F	p
Group	11.022	2	5.511	9.445	.0001
Residual	50.767	87	.584	-	-
Total:	61.789	89	.694	-	-

The results in Table 22 indicate that there is a highly significant difference, $F(2,87) = 9.4, p < .0001$, between three groups on Forced Form Colour Responses and Forced Colour Form Responses (F/C / C/F) of Rorschach.

Table 23

One Way Analysis of Variance on Achromatic Colour Responses (C') of Rorschach of Psychotic Depressive, Schizophrenic and Normal Females.

Source of Variance	SS	df	MS	F	p
Group	5.089	2	2.544	2.553	.084
Residual	86.700	87	.997	-	-
Total:	91.789	89	1.031	-	-

The results in Table 23 indicate that there is no significant difference, $F(2,87) = 2.5, p < .084$, between three groups on Achromatic Colour Responses (C') of Rorschach.

Table 24

One Way Analysis of Variance on Form Achromatic Colour and Form Achromatic Colour Responses (FC' /C'F) of Rorschach of Psychotic Depressive, Schizophrenic and Normal Females.

Source of Variance	SS	df	MS	F	P
Group	28.422	2	14.211	8.871	.0001
Residual	139.367	87	1.602	-	-
Total:	167.789	89	1.885	-	-

The results in Table 24 indicate that there is a highly significant difference, $F(2,87)$, 8.8, $p < .0001$, between three groups on Form Achromatic Colour and Form Achromatic Colour Responses (FC' / C'F) of Rorschach.

ONE WAY ANALYSIS OF VARIANCE ON CONTENT SCORES

Table 25

One Way Analysis of Variance on Human Responses (H) of Rorschach of Psychotic Depressive, Schizophrenic and Normal Females.

Source of Variance	SS	df	MS	F	p
Group	43.889	2	21.944	8.352	.0001
Residual	228.600	87	2.628	-	-
Total:	272.789	89	3.062	-	-

The results shown in Table 25 indicate that there is a highly significant difference, $F(2,87) = 8.3$, $p < .0001$, between three groups on Human Responses (H) of Rorschach.

Table 26

One Way Analysis of Variance on Human Detail Responses (Hd) of Rorschach of Psychotic Depressive, Schizophrenic and Normal Females.

Source of Variance	SS	df	MS	F	p
Group	126.667	2	63.333	19.578	.0001
Residual	281.433	87	3.235	-	-
Total:	408.100	89	4.585	-	-

Table 26 indicates that there is a highly significant difference, $F(2,87) = 19.5$, $p < .0001$, between three groups on Human Detail Responses (Hd) of Rorschach.

Table 27

One Way Analysis of Variance on Animal Responses (A) of Rorschach of Psychotic Depressive, Schizophrenic and Normal Females.

Source of Variance	SS	df	MS	F	P
Group	1022.867	2	511.433	40.570	.0001
Residual	1096.733	87	12.606	-	-
Total:	2119.600	89	23.816	-	-

Table 27 indicates that there is a highly significant difference, $F(2,87) = 40.5$, $p < .0001$, between three groups on Animal Responses (A) of Rorschach.

Table 28

One Way Analysis of Variance on Animal Detail Responses (Ad) of Rorschach of Psychotic Depressive, Schizophrenic and Normal Females.

Source of Variance	SS	df	MS	F	P
Group	631.356	2	315.678	45.285	.0001
Residual	606.467	87	6.971	-	-
Total:	1237.822	89	13.908	-	-

The results shown in Table 28 indicate that there is a highly significant difference, $F(2,87) = 45.3, p < .0001$, between three groups on Animal Detail Responses (Ad) of Rorschach.

Table 29

One Way Analysis of Variance on Human Anatomy Responses (At) of Rorschach of Psychotic Depressive, Schizophrenic and Normal Females.

Source of Variance	SS	df	MS	F	P
Group	257.689	2	128.844	17.927	.0001
Residual	625.300	87	7.187	-	-
Total:	882.989	89	9.921	-	-

The results in Table 29 indicate that there is a highly significant difference, $F(2,87) = 17.9, p < .0001$, between three groups on Anatomy (At) responses of Rorschach.

Table 30

One Way Analysis of Variance on Animal Anatomy Responses (A At) of Rorschach of Psychotic Depressive, Schizophrenic and Normal Females.

Source of Variance	SS	df	MS	F	P
Group	.156	2	.078	.630	.535
Residual	10.733	87	.123	-	-
Total:	10.889	89	.122	-	-

Table 30 indicates that there is no significant difference, $F(2,87) = .63$, $p < .535$, between three groups on Animal Anatomy (A At) responses of Rorschach.

Table 31

One Way Analysis of Variance on Object Responses (Obj) of Rorschach of Psychotic Depressive, Schizophrenic and Normal Females.

Source of Variance	SS	df	MS	F	p
Group	87.089	2	43.544	14.160	.0001
Residual	267.533	87	3.057	-	-
Total:	354.622	89	3.985	-	-

The results in Table 31 indicate that there is a highly significant difference, $F(2,87) = 14.2$, $p < .0001$, between three groups on Object (Obj) responses of Rorschach.

Table 32

One Way Analysis of Variance on Nature Responses (N) of Rorschach of Psychotic Depressive, Schizophrenic and Normal Females.

Source of Variance	SS	df	MS	F	P
Group	133.889	2	66.944	22.760	.0001
Residual	225.900	87	2.941	-	-
Total:	389.789	89	4.380	-	-

Table 32 indicates that there is a highly significant difference, $F(2,87) = 22.8$, $p < .0001$, between three groups on Nature (N) responses of Rorschach.

Table 33

One Way Analysis of Variance on Geography Responses (Geo) of Rorschach of Psychotic Depressive, Schizophrenic and Normal Females.

Source of Variance	SS	df	MS	F	P
Group	.022	2	.011	.029	.971
Residual	33.133	87	.381	-	-
Total:	33.156	89	.373	-	-

The results in Table 33 indicate that there is no significant difference, $F(2,87) = .03$, $p < .971$, between three groups on Geography (Geo) responses of Rorschach.

Table 34

One Way Analysis of Variance on Sexual Responses (Sex) of Rorschach of Psychotic Depressive, Schizophrenic and Normal Females.

Source of Variance	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Group	5.422	2	2.711	.827	.441
Residual	285.200	87	3.278	-	-
Total:	290.622	89	3.265	-	-

The results shown in Table 34 indicate that there is no significant difference, $F(2,87) = .83, p < .441$, between three groups on Sexual (*Sex*) responses of Rorschach.

Table 35

One Way Analysis of Variance on Eruption Responses (Eru) of Rorschach of Psychotic Depressive, Schizophrenic and Normal Females.

Source of Variance	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P</i>
Group	.467	2	.233	1.475	.181
Residual	11.633	87	.134	-	-
Total:	12.100	89	.136	-	-

The results in Table 35 indicate that there is no significant difference, $F(2,87) = 1.5, p < .181$, between three groups on Eruption (*Eru*) responses of Rorschach.

Table 36

One Way Analysis of Variance on Plant Responses (PI) of Rorschach of Psychotic Depressive, Schizophrenic and Normal Females.

Source of Variance	SS	df	MS	F	P
Group	28.156	2	14.078	7.601	.001
Residual	161.133	87	1.852	-	-
Total:	189.289	89	2.127	-	-

Table 36 indicates that there is a highly significant difference, $F(2,87) = 7.6$, $p < .001$, between three groups on Plant (PI) responses of Rorschach.

Table 37

One Way Analysis of Variance on Blood Responses (BI) of Rorschach of Psychotic Depressive, Schizophrenic and Normal Females.

Source of Variance	SS	df	MS	F	p
Group	7.622	2	3.811	7.530	.001
Residual	44.033	87	.506	-	-
Total:	51.656	89	.580	-	-

The results in Table 36 indicate that there is a highly significant difference, $F(2,87) = 7.5$, $p < .001$, between three groups on Blood (BI) responses of Rorschach.

Table 38

One Way Analysis of Variance on Reflection Form Responses (rF) of Rorschach of Psychotic Depressive, Schizophrenic and Normal Females.

Source of Variance	SS	df	MS	F	p
Group	2.600	2	1.300	2.674	.075
Residual	42.300	87	.486	-	-
Total:	44.900	89	.504	-	-

Table 38 indicates that there is no significant difference, $F(2,87) = 2.6$, $p < .075$, between three groups on Reflection Form (rF) responses of Rorschach.

Table 39

One Way Analysis of Variance on Reflection Responses (r) of Rorschach of Psychotic Depressive, Schizophrenic and Normal Females.

Source of Variance	SS	df	MS	F	p
Group	7.756	2	3.878	6.761	.002
Residual	49.900	87	.574	-	-
Total:	57.656	89	.648	-	-

The results in Table 39 indicate that there is a highly significant difference, $F(2,87) = 6.7$, $p < .002$, between three groups on Reflection (r) responses of Rorschach.

Table 40

One Way Analysis of Variance on x-ray Responses (X-ray) of Rorschach of Psychotic Depressive, Schizophrenic and Normal Females.

Source of Variance	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Group	.956	2	.478	1.265	.287
Residual	32.867	87	.378	-	-
Total:	33.822	89	.380	-	-

Table 40 indicates that there is no significant difference, $F(2,87) = 1.3$, $p < .287$, between three groups on x-ray (*X-ray*) responses of Rorschach.

Table 41

One Way Analysis of Variance on Fire Responses (Fi) of Rorschach of Psychotic Depressive, Schizophrenic and Normal Females.

Source of Variance	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Group	.200	2	.100	.437	.647
Residual	19.900	87	.229	-	-
Total:	20.100	89	.226	-	-

The results in Table 41 indicate that there is no significant difference, $F(2,87) = .44$, $p < .647$, between three groups on Fire (*Fi*) responses of Rorschach.

Table 42

One Way Analysis of Variance on Colour Responses (Col) of Rorschach of Psychotic Depressive, Schizophrenic and Normal Females.

Source of Variance	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Group	5.956	2	2.978	3.673	.029
Residual	70.533	87	.811	-	-
Total:	76.489	89	.859	-	-

The results in Table 42 indicate that there is a significant difference, $F(2,87) = 3.7, p < .029$, between three groups on Colour (C) responses of Rorschach.

Table 43

One Way Analysis of Variance on Architectural Responses (Arch) of Rorschach of Psychotic Depressive, Schizophrenic and Normal Females.

Source of Variance	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Group	.356	2	.178	.577	.564
Residual	26.800	87	.308	-	-
Total:	27.156	89	.305	-	-

The results in Table 43 indicate that there is no significant difference, $F(2,87) = .58, p < .564$, between three groups on Architectural (Arch) responses of Rorschach.

Table 44

One Way Analysis of Variance on Super Natural Human Figure Responses [(H)] of Rorschach of Psychotic Depressive, Schizophrenic and Normal Females.

Source of Variance	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Group	1.067	2	.533	.344	.710
Residual	135.033	87	1.552	-	-
Total:	136.100	89	1.529	-	-

The results in Table 44 indicate that there is no significant difference, $F(2,87) = .34, p < .710$, between three groups on Super Natural Figure Responses [(H)] responses of Rorschach.

Table 45 presents the scores of psychotic depressive females on Rorschach's distinguishing and critical categories. It is assumed that psychotic depressives will produce a distinct pattern on these categories. Table 45 gives the total responses, percentages, mean and ratios of scores of psychotic depressives on distinguishing and critical Rorschach categories. This includes the scores of whole (*W*), large usual detail (*D*), small usual detail (*d*), rare detail and white space (*Dd+S*), form sum and form plus (*F sum, F+*), sexual responses (*Sex*), x-ray (*X-ray*), and animal (*A*) responses. Table 45 also gives the scores of psychotic depressives on Rorschach's critical categories. These eight critical categories are assumed to produce a consistent pattern when compared with the normative samples (Exner & Weiner, 1982). These categories include vista (*V*) responses, ego centricity index (*EC*), achromatic colour responses (*C'*), experience balance (*EB*), *R* average (*R*), form colour responses (*FC*) and affective ratio (*Afr*).

Table 45

Total Responses, Percentages, Means and Ratios of Scores of Psychotic Depressives on Distinguishing and Critical Categories of Rorschach (R= 353)

<i>Distinguishing Categories</i>	<i>Total Responses</i>	<i>Percentages</i>
<i>W's</i>	117	33.14
<i>D</i>	156	44.20
<i>d</i>	15	4.24
<i>Dd + S</i>	55	15.58
<i>F Sum</i>	181	51.27
<i>F+</i>	79	22.40
<i>Sex</i>	32	9.06
<i>X-ray</i>	9	2.54
<i>A</i>	108	30.59

<i>Critical Categories</i>	<i>Total Responses</i>	<i>Percentages/Mean/ Ratios</i>
<i>Vista Response (V)</i>	19	5.38
<i>Ego-Centricity Index (EC)</i>	$3 \times 6 + (1)/353$	0.05
<i>C'</i>	70	19.83
<i>MOR Sum</i>	19	5.40
<i>EB[M:Sum C]</i>	10:26	1:3
<i>R average</i>	353	11.76
<i>FC</i>	19	5.40
<i>Afr [Sum R(VIII+IX+X/Sum R(I-VII)]</i>	104/1-249	0.41

Results in Table 45 indicate that the psychotic depressives are producing a distinct pattern on all the distinguishing categories except on whole (*W*) response category. Results in Table 45 also indicate that the psychotic depressives have produced a distinct pattern on these critical categories of Rorschach, excepting one category i.e., *FC* responses. It indicates that psychotic depressives gave greater number of *V*, low *EC*, *C'*, *R*, *EB*, *Afr* responses.

Table 46 gives the scores of schizophrenics on universally defined distinguishing and critical categories of Rorschach. Total responses and percentage of scores of schizophrenics are given on whole (*W*), large usual detail (*D*), small usual detail (*d*), rare detail and white space (*Dd+S*), form plus (*F+*), and *R* plus (*R+*), sum *C* (*SumC*) and original (*O*) responses. Table 46 also presents Rorschach patterns of schizophrenics on nine critical categories including, *W-*, *weak FLR*, (*M-*), (*M-*).... *Hd*, *CF+C*, pure *C*, *Cont* and *Conf*.

Table 46

Total Responses, Percentages, Means and Ratios of Scores of Schizophrenics on Distinguishing and Critical Categories of Rorschach (R= 372)

<i>Distinguishing Categories</i>	<i>Total Responses</i>	<i>Percentages</i>
<i>W</i>	126	33.8
<i>D</i>	190	51.0
<i>d</i>	19	5.1
<i>Dd + S</i>	25	6.7
<i>F+</i>	94	25.2
<i>R+</i>	125	33.6
<i>Sum C</i>	31	8.3
<i>Original(O)</i>	301	80.9

Cont... Table 46.

<i>Critical Categories</i>	<i>Total Responses</i>	<i>Percentages/ Means/Ratios</i>
<i>W-</i>	72	19.35
<i>Weak FLR</i>	301	80.91
<i>(M-)</i>	17	4.56
<i>(M-)...Hd</i>	8	2.15
<i>CF + C</i>	18	4.83
<i>Pure C (C)</i>	13	3.49
<i>Contamination (Cont)</i>	16	4.30
<i>Confabulation (Conf)</i>	6	1.61

Results in Table 46 indicate that schizophrenics have formed a distinct pattern on all the distinguishing and critical categories. Table indicates that schizophrenics gave lower *F+*, *D*, *d*, *Dd+S*, and *R+* responses. Results of Table 46 indicate that the schizophrenics are producing a distinct pattern on these critical categories with the exception on two categories including *CF+F* and *Pure C (C)*.

Table 47 gives the scores of normals on distinguishing and critical categories of Rorschach. Total responses and percentages of normals are given on *R Plus (R+)* responses, whole (*W*) responses, large usual detail (*D*) responses, small usual detail (*d*) responses, rare detail plus white space (*Dd+S*) responses, form sum (*F Sum*) responses, form plus (*F+*) responses, sum of colour responses (*Sum C*) responses, original (*O*) responses, sexual (*Sex*) responses, x-ray (*X-ray*) responses and animal (*A*) responses.

Table 47 also gives patterns of responses of normals on critical categories including *EC*, *C'*, *MOR Sum*, *FC*, *R average*, *Afr Sum*, *weak FLR*, *(M-)*, *(M-)...Hd*, *CF+C*, *Pure C (C)*, *Cont* and *Conf* responses.

Table 47

Total Responses, Percentages, Means and Ratios of Scores of Normals on Distinguishing and Critical Categories of Rorschach (R= 1188)

<i>Categories</i>	<i>Total Responses</i>	<i>Percentages</i>
<i>R+</i>	835	70.28
<i>W</i>	286	24.07
<i>D</i>	655	55.13
<i>d</i>	105	8.83
<i>Dd + S</i>	142	11.95
<i>F Sum</i>	759	63.88
<i>F+</i>	640	53.87
<i>Sum C</i>	100	8.41
<i>Original (O)</i>	1003	84.42
<i>Sex</i>	22	1.85
<i>X-ray</i>	3	0.25
<i>A</i>	325	27.35
<i>Scores of Normals on Critical Categories</i>	<i>Total Responses</i>	<i>Percentages/ Means/Ratios</i>
<i>Vista Responses (V)</i>	44	3.70
Ego-Centricity (EC) Index $3r+(2)/R$	$3 \times 35 + (0)/1188$	0.08
<i>C'</i>	37	3.11
<i>MOR Sum</i>	-	-
<i>EB(M:SumC)</i>	91:100	1:1
<i>FC</i>	39	3.30
<i>R average</i>	1188	40.00
<i>Afr[Sum R VIII+IX+X/sum R(I-VII)]</i>	$406/(1-782)$	0.52

<i>Scores of Normals on Critical Categories</i>	<i>Total Responses</i>	<i>Percentages</i>
<i>W-</i>	30	2.52
<i>Weak FLR</i>	35	2.94
<i>(M-)</i>	13	1.09
<i>(M-)...Hd</i>	2	0.16
<i>CF + C</i>	48	4.04
<i>Pure C (C)</i>	43	3.61
<i>Contamination (Cont)</i>	3	0.25
<i>Confabulation (Conf)</i>	2	0.16

Results in Table 47 indicate that normals have produced a distinct pattern on all the distinguishing and critical categories. Table indicates that normals gave higher responses on *W's, D, d, Dd+S, F+, R+, SumC, O, EC* and *R* average responses. Results of Table 47 also indicate that the normals are producing distinct patterns on the critical categories. Normals have produced lower responses on *Sex, X-ray, A, V, EB, FC, Afr, W-, Weak FLR, (M-), (M-)...Hd, CF+C, Pure C (C), Cont* and *Conf* responses. The responses category of MOR is non-prevalent in normals.

Table 48 gives the pattern summary of responses of psychotic depressives, schizophrenics and normals on Rorschach. It includes total responses, percentages and ratios of scores of categories including *R+, W's, D, d, Dd+S, F sum, F+, SumC, Ori, Sex, X-ray, A, V, C', MOR sum, EB, FC, Raverage, Afr, W-, Weak FLR, (M-), (M-)...Hd, CF+C, Pure C (C), Cont* and *Conf*.

Table 48

Pattern Summary of Total Responses, Percentages, Means and Ratios of Psychotic Depressive, Schizophrenic and Normal Females on Rorschach Scoring Categories

Categories	Psychotic Depressives (N= 30)			Schizophrenics (N= 30)			Normals (N= 30)		
	Total Responses	Percentages	Mean	Total Responses	Percentages	Mean	Total Responses	Percentages	Mean
R ⁺	126	35.69	4.20	125	33.60	4.16	835	70.28	27.80
W's	117	33.14	3.90	126	33.87	4.20	286	24.07	9.53
D	156	44.20	5.20	190	51.07	6.33	655	55.13	21.83
d	15	4.24	0.50	19	5.10	0.63	105	8.83	3.50
Dd ⁺ S	55	15.58	1.83	25	6.72	0.83	142	11.95	4.73
F Sum	181	51.27	6.03	225	60.48	7.50	759	63.88	25.30
F ⁺	79	22.40	2.63	94	25.26	3.13	640	53.87	21.33
SumC	26	7.36	0.86	31	8.33	1.03	100	8.41	3.33
Ori	286	81.01	9.53	301	80.91	10.03	1003	84.42	33.40
Sex	32	9.06	1.07	14	3.76	0.47	22	1.85	0.73
X-ray	9	2.54	0.30	2	0.53	0.06	3	0.25	0.10
A	108	30.59	3.60	113	30.37	3.76	325	27.35	10.83

Categories	Total Responses	%ages, Means & Ratios	Total Responses	%ages, Means & Ratios	Total Responses	%ages, Means & Ratios
Vista Responses (V)	19	5.38	8	2.15	44	3.70
Ego-Centricity Index (EC)	3x6+(1)/353	0.05	3x21(0)/372	.16	3x35+(0)/1188	0.08
C'	70	19.83	25	6.72	37	3.11
MORSum	19	5.40	5	1.34	--	--
EB(M:SumC)	10:26	1:3	17:31	1:2	91:100	1:1
FC	19	5.40	3	0.80	39	3.28
R-average	353	11.76	372	12.40	1188	40.00
Afr	104/(1-249)	0.41	113/(1-259)	0.43	406/(1-782)	0.52

Categories	Total Responses	Percentages	Mean	Total Responses	Percentages	Mean	Total Responses	Percentages	Mean
W-	79	22.37	2.63	72	19.35	2.40	30	2.52	1.00
Weak _{FLR} (M-)	227	64.30	7.56	301	80.91	10.03	35	2.94	1.16
(M)..Hd	9	2.54	0.30	17	4.56	0.56	13	1.09	0.43
CF ⁺ C	6	1.69	0.20	8	2.15	0.26	2	0.16	0.06
Pure C(C)	13	3.68	0.43	18	4.83	0.60	48	4.04	1.60
Cont	6	1.69	0.20	13	3.49	0.43	43	3.61	1.43
Conf	8	2.26	0.26	16	4.30	0.53	3	0.25	0.10
	3	0.84	0.10	6	1.61	0.20	2	0.16	0.06

Results in Table 48 indicate that three groups of psychotic depressives, schizophrenics and normals have formed distinctive patterns of responses on all the distinguishing and critical categories of Rorschach.

DISCUSSION

The results in Table 1 show that psychotic depressives schizophrenics and normals gave 353, 372 and 1188 total responses (*R*) respectively. The mean frequencies of their responses were 11.76, 12.4 and 40.00 respectively. Normals gave highest number of total responses, psychotic depressives the least, whereas, schizophrenics are falling in between the two. The patterns of *R* in three groups reflect response inhibition and emotional constriction of the psychotic depressives and freedom of expressions and response facilitation of the normals.

Inner Resources and Impulse Life

The examination of the psychogram (Appendix D) reveals that majority of the responses of psychotic depressives reflect inhibition and emotional constriction which is experienced or manifested by inner determinants, movements and use of shading in the form of vista responses. As compared to psychotic depressives, the schizophrenics gave responses on both sides of the psychogram, however, these too are piling up on the left side of the psychogram. The psychogram of the normals shows a good distribution of responses, with the majority falling on the right side. This indicates that the normals are able to react freely to the environment. Table 1 shows that *M%* responses are 3 in psychotic depressive, 4 in schizophrenics and 7 in normals. The pattern of *M%* suggests greater adjustive abilities of normals as compared to schizophrenics and psychotic

depressives. These differences in the percentages clearly indicate that psychotic depressives find it more difficult to form good relationship with others as compared to the schizophrenics. High number of human movement responses in normals may be taken as an indication of their well-adjusted social personalities.

Table 1 also shows that $F\%$ responses are 51 in psychotic depressives, 60 in schizophrenics and 63 in normals. Their relative frequencies are 29, 34 and 36 respectively. Among these F responses the good form levels ($F+$) are 22%, 25% and 54% in three groups respectively. Table 1 indicates that normals gave highest F responses followed by schizophrenics and psychotic depressives. This pattern indicates finer perceptual accuracy in normals and also gives an indication of perceptual inadequacy in other two groups. Table 1 shows that $W:M$ responses are 117:10 in psychotic depressives, 126:17 in schizophrenics and 286:91 in normals. The relative ratios are 12:1, 7:1 and 3:1 respectively for the three groups. In the normals $W > 2M$ with good $F\%$ shows their intelligence and strong drive of accomplishment as compared to the psychotic depressives and schizophrenics whose pattern reflects apathy and loss of vigor.

Table 1 shows that the ratio of $(H+A) : (Hd + Ad)$ for psychotic depressives is 125:19, schizophrenics is 165:34 and normals is 392:270. The relative ratios of these responses are 7:1, 5:1 and 1:1 respectively. Sum $H+A$ is expected to be approximately twice the sum of Hd and Ad scores. Table 1 shows that the ratio of human plus animal details and human plus animal details is greater in psychotic depressives and schizophrenics. In the normals it is 1:1 which is quite closer to the normal expectancy (Klopfer et al., 1956). In psychotic depressives and schizophrenics human and animal responses are outstripping the human and animal details. This pattern suggests the presence of a critical approach in these clinical groups. Table 1 indicates that the ratio

of $H:A$ ($H+Hd:A+Ad$) is 30:114 in psychotic depressives, 75:124 in schizophrenics and in 160:502 in normals; their relative ratios are 1:4, 1:2 and 1:3 respectively. An abundance of animal responses (4 times greater) is found in psychotic depressives. These responses, on the one hand, are taken as an indicator of conformity in normals and, on the other hand, a reflection of difficulties in establishing good empathatic interpersonal relationship in psychotics. This, however, needs confirmation by other interrelated hypotheses.

Table 1 shows that the ratio of $FM:M$ is 17:10 in psychotic depressives, 31:17 in schizophrenics and 77:91 in the case of normals. Their converted relative ratios are 2:1, 2:1 and 0.8:1 respectively. It also indicates that FM are found more in psychotic depressives and schizophrenics as compared to the normals. It has been hypothesized that $2FM \geq M$ shows a high need of impulse gratification and a conflict of impulse life in the clinical groups (Klopfer et al., 1956). This seems true in the case of psychotic depressives and schizophrenics. In normals, animal movement responses are almost equal to the human movement responses. Other interrelated hypothesis about emotional reactivity is $FC:CF+C$, which is taken as an indicator of emotional control or impulsivity. Table 1 shows that the ratio of $FC:CF+C$ is 19:13 in psychotic depressives, 3:18 in schizophrenics and 39:48 in normals. Their converted ratios are 1:0.7, 1:6 and 1:1 respectively. In the case of normals this ratio is equal, which shows a balance between the emotional and impulse life. In psychotic depressives this ratio shows strong constriction and control, whereas, in schizophrenics $CF+C$ responses are out stripping FC responses. Table 1 also shows that percentages of sum of last three cards (VIII+ IX+ X %) are 27, 31 and 34 for psychotic depressives, schizophrenics and normals respectively. It appears that psychotic depressives are less responsive to the environment as compared to the schizophrenics and normals.

Inner tension and struggle between conflicting impulses is measured by *m Sum* responses. Table 2 shows an absence of *m Sum* responses in psychotic depressives, 10 (3.0%) in schizophrenics and 24 (2.0%) in the normals respectively. In schizophrenics relatively high percentage of *m Sum* responses is indicative of inner tension and conflict (Klopper et al., 1956). In normals presence of *m Sum* responses is an indicator of their ability to sublimate and structure impulses in an acceptable manner. It can also be interpreted as greater awareness of the prompting of the more basic drives in normals.

EB: Introversive : Extratensive Balance

Experience balance (*EB*) or *M:SumC* is the personality type which Rorschach (1922/1975) used for making distinction between various clinical groups and the normals. Table 1 shows that the ratio of *M:SumC* responses is 10:26 for psychotic depressives, 17:31 for schizophrenics and 91:100 for normals. Their relative ratios came out to be 1:3, 1:2, and 1:1 respectively. In the case of normals *EB* appeared to be balanced. Assessment of overall pattern of *EB* indicates that normals has well developed imaginal function, both in terms of fantasy and long-range goals. It also indicates that the normals not only seem responsive to external stimuli but also tend to restrict the world in terms of their values and affectional needs.

Three other measures were taken as an indicator of *EB*; the ratios of $(FK+Fc) : F$, $(Fc+cF+c+C'+C'F+FC') : (FC+CF+C)$ and $CF+C:FC$. Table 1 indicates that the ratios of $FK+Fc:F$ are 17:181 in psychotic depressives, 5:225 in schizophrenics and 19:759 in normals. The converted relative ratios are 1:10, 1:45 and 1:40, respectively. Higher number of *F* responses as compared to $FK+Fc$ responses generally show imaginal poverty and constriction in psychotic depressives and schizophrenics (Schafer, 1954).

Similarly, greater $FK+Fc$ responses in psychotic depressives as compared to schizophrenics show their need of acceptance of their affectional needs, which may lead to a lack of personal involvement in interpersonal relationships (Klopfer et al., 1954).

Table 1 shows that the ratio of $Fc+cF+c+C'+C'F+FC'$: $FC+CF+C$ is 24:32, 12:30 and 13:87, for psychotic depressives, schizophrenics and normals. Their corresponding converted relative ratios are 1:1, 1:3 and 1:7 respectively. Table 1 also shows that the proportion of $FC:CF+C$ is 19:13 in psychotic depressives, 3:18 in schizophrenics and 39:48 in the normals. The converted relative ratios of these responses are 1:0.7, 1:6, and 1:1, respectively. Table 1 shows that ratio of $Ach:cho$ is 25.39:33.18 in psychotic depressives, 28.26:25.43 in schizophrenics and 11.82:12.1 in normals. It appears that in the normals proportion of chromatic responses is greater than achromatic responses as compared to schizophrenics. These responses are almost flattened in psychotic depressives which indicates their emotional ineptness (Klopfer et al., 1954). It is assumed that double the total number of responses to achromatic cards than the chromatic ones, there will be little need for affection; which is not held back by relative anxieties.

Proportions Relating to Constrictive Control

$(Fk+Fc)$: F indicates the proportion of the organization of affectional need. Table 1 shows that the ratio of $Fk+Fc:F$ is 17:181 in psychotic depressives, 5:225 in schizophrenics and 19:759 in normals. Their relative ratios are 1:10, 1:45 and 1:40, respectively. Higher proportion of F responses in normals is indicative of their inclination towards denial, whereas, in schizophrenics it may be taken as repression or under development of the need for affection (Klopfer et al., 1954). Table 1 also shows that

$F+$ % is 22% in psychotic depressives, 25% in schizophrenics and 54% in normals. A low $F+$ % in psychotic depressives and schizophrenics indicates their distorted perception, whereas, a high $F+$ % in normals shows meticulousness and correctness in the attitude of the normals (Schafer, 1954).

Intellectual Interest and Ambition

Number of Responses (R). Table 2 shows the patterns of R in the three groups. Table 2 shows that the psychotic depressives gave 353 , schizophrenics 372 and normals 1188 total number of responses (R). The mean R of three groups is 11.76, 12.40 and 40.00 respectively. Highest R are given by the normal group and the lowest by the psychotic depressives, whereas, schizophrenics are falling in between the three groups. R is taken as an indicator of productivity and intelligence. Low R 's are the projections of poverty of ideas and defensiveness (Schafer, 1954). High R of normals shows group's responsiveness to outer stimulation. A high productivity is interpreted as responsiveness and receptiveness to the world around one sees (Klopfer et al., 1954).

One's manner of approach is detected by W 's ($W+W\mid+DW$) and D 's. Table 2 shows that W 's ($W+W\mid+DW$) are found to be 117 in the psychotic depressives , 126 in schizophrenics and 286 in the normals. Their corresponding percentages are 33.14%, 33.87% and 24.07% respectively. The mean values are 3.90, 4.20 and 9.35 for these groups. All of these W 's are falling in the average expectancy i.e., 25-35% (Klopfer & Davidson, 1962). Other indicators of manner of approach are D , d and $Dd+S$, the normal range of which is 45, 5-15 and 12% (Klopfer & Davidson, 1962) respectively. Table 2 shows that psychotic depressives gave 44.20% of D responses, 4.23% d and 15.58% of $Dd+S$ responses, schizophrenics gave 51.07% D 's, 5.10% d and 6.72%

Dd+S responses, whereas, the normals gave 55.13% *D*'s, 8.83% *d* and 11.95% *Dd+S* responses. In the normals rare detail (*Dd+S*) responses are slightly greater than the normal expectancy, which may be taken as an indicator of interest in unusual, but in the clinical population it is taken as an indication of pathological thoughts and inability to perceive usual and normal things.

The extent of individual intellectual ambition is measured through *W:M* ratio. Table 1 shows that *W:M* ratio is 117:10 for psychotic depressives, 126:17 for schizophrenics and 286:91 for the normals. Their converted relative ratios came out to be 12:1, 7:1 and 3:1 for the three groups. This indicates a preponderance of *W* response in psychotic depressive and slightly balanced *W:M* ratio in the normal group.

Another indicator of intellectual integration is the ratio of *W:D*. Table 1 shows that ratio of *W:D* is 117:156 in psychotic depressives, 126:190 in schizophrenics and 286:655 in the normals. Their converted relative ratios are 1:1, 1:1 and 1:2 respectively. Table 2 shows that *D* responses are more than twice of *W* responses in the normals showing their ability to differentiate perceptually.

Other indicators of intellectual interest and ambition are total time (*T.T*), reaction time (*R.T*) and average time per response (*T/R*). Table 1 shows that the psychotic depressives took an average of 74 seconds to respond to the ten cards, whereas, schizophrenics took an average of 62 seconds and the normals took an average of 57 seconds to complete their protocols (*T.T*). Table 1 also shows that average reaction time (*RT*) for each card is 20 seconds for psychotic depressives, 29 seconds for schizophrenics 29 seconds and 18 seconds in the normals.

Klopfer et al. (1954) and Exner (1974) have reported that a significant difference of 10 seconds should be between mean *R.T* of chromatic: achromatic cards. Table 1 shows that the mean *R.T* of psychotic depressives to achromatic cards is 25 seconds as compared to the mean *R.T* to achromatic cards which is 33 seconds. The mean *R.T* of schizophrenics to achromatic cards is 28 seconds as compared to a mean *R.T* of 25 seconds to chromatic cards. In the group of normals there is a good balance between the average *R.T* of chromatic and achromatic cards, i.e., 13 : 13 seconds. This indicates a balance in their emotional life and inner needs. This balance seems to be disturbed in psychotic depressives and schizophrenics. Table 1 shows that the ratio of $Fc+c F+c + C' + C'F + FC'$: $FC+CF+C$ is 24:32 for psychotic depressives, 12:30 for schizophrenics and 13:87 for the normals. Their converted relative ratios are 1:1, 1:3 and 1:7. Greater proportion of $FC+CF+C$ responses in the normals suggests emotionality and need of outer stimulation as compared to the psychotic depressives whose relative ratio is almost equal. The psychotic depressives look exhibiting strong control of emotionality and weak interaction with outer realities, whereas, the schizophrenics are falling in between the two groups.

Table 2 shows that *k sum* ($k+Fk/kF$) responses came out to be 19 (5.38%) in psychotic in psychotic depressives, 7 (4.56%) in the schizophrenics and 4 (0.33%) in the normals. Relatively greater number of *k sum* responses in psychotic depressives suggest undue anxiety. This has also been interpreted as suppression of impulses in psychotic depressives (Klopfer et al., 1954). Table 2 also shows that the frequencies of Fc/cF responses in psychotic depressives is 2 (0.56%), in schizophrenics it is 2 (2.53%) and 37 (3.11%) in the normals respectively. A greater number of Fc responses in the normals indicate the need for physical contact which is very low in schizophrenics and psychotic depressives are falling in between the two groups.

Location Scores

Total Number of Responses (*R*)

Table 2 shows the patterns of *R* for three groups. The frequencies of *R* are 353 for psychotic depressives, 372 for schizophrenics and 1188 for the normals. The mean frequencies are 11.76, 12.40 and 40.00 respectively. Table 2 also indicates the pattern of *R+* responses. The frequencies of *R+* are 126 for psychotic depressives, 125 for schizophrenics and 835 for the normals. The mean frequencies are 35.69, 33.60 and 70.28 respectively. The patterns of *R* in three groups suggests that the normals gave highest number of *R* responses, followed by schizophrenics and psychotic depressives. *R+* responses are highest in normals, lowest in schizophrenics, whereas, psychotic depressives were falling between the two. Average *R* of our normal sample is even greater than the average *R* of Klopfer et al.s' (1954) sample which ranged from 20 to 45. A high *R* suggests the presence of ideational activity in the normals. The average *R* of psychotic depressives is very low and it is quite closer to average *R* of severely depressed patients of Rapaport, Gill and Schafer (1980) which ranged from 11 to 15. A low *R* of psychotic depressives suggests the presence of inhibition and severe depression, whereas, *R* responses of schizophrenics are falling in between the two. This pattern of *R* indicates the presence of deteriorating schizophrenia .

Whole Responses (*W*'s)

Table 2 shows the patterns of *W*'s for three groups. *W*'s were given by most of the psychotic depressives, schizophrenics and normals. The frequency of *W*'s (*W*+*W*1+*DW*) is 117 (33.14%) for psychotic depressives, 126 (33.87%) for schizophrenics and 286

(24.07%) for the normals respectively. The mean frequencies of *W*'s for these three groups are 3.87, 4.20 and 9.53 respectively. These patterns suggest that normal group gave a higher average of *W*'s responses as compared to psychotic depressives and schizophrenics. However, the *W*'s average for all the groups falls in the normal range (25-35 %). Table 2 also indicates that *W*- responses are 79 (22.37%), 72 (19.35%) and 30 (2.52%) in three groups. Their mean values are 2.63, 2.40 and 1.00 respectively. A high number of *W*'s suggest the presence of articulation and good adjustment in the normals. *W*'s of schizophrenics are falling in between as compared to the other two groups. Generally *W*'s are common in schizophrenics (Rapaport, Gill & Schafer, 1980; & Klopfer et al. 1956) .

The results in Table 3 show that three groups are differing significantly, $F(2,87)=30.176$, $p < .0001$, on *W*'s response category.

Detail Response (*D*)

Table 2 shows the patterns of *D* responses in three groups. The frequency of *D* responses is 156 (44.20%) in psychotic depressives, 190 (51.07%) in schizophrenics and 655 (55.13%) in normals. The means for *D* responses for the psychotic depressives, schizophrenics and normals are 5.20, 6.33 and 21.83 respectively. The patterns indicate that normals gave highest number of *D* responses followed by schizophrenics and psychotic depressives. A high *D* suggests normal's interest in obvious things, whereas, low *D*'s in psychotic depressives indicates the presence of severe depression.

Table 4 shows that three groups differ significantly on *D* responses, $F(2,87)=90.017$, $p < .0001$.

Tendency Towards W Responses (*DW*)

Table 2 shows the patterns of *DW* responses for the three groups. The frequencies of *DW* responses are 3 (0.84%) in psychotic depressives, 6 (1.61%) in schizophrenics and 2 (0.16) in normals is. Mean values of *DW* responses are 0.10, 0.20 and 0.07, respectively. The patterns reveal that schizophrenics gave relatively more *DW* responses as compared to psychotic depressives and normals. Prevalence of *DW* in schizophrenics and psychotic depressives reveals the presence of confabulatory thoughts and weak articulation (Klopfer et al., 1954).

However, results in Table 5 show that differences between three groups on *DW* responses were found to be insignificant, $F(2,87) = .821, p < .443$.

Cut-off Wl Responses (*Wl*)

Table 2 indicates the patterns of *Wl* responses for three groups. *Wl* is absent in schizophrenics and is found in the records of psychotic depressives and normals with a frequency of 1 (0.28%) and 26 (2.18%) respectively. The mean values of these responses are 0.03 and 0.86 for the two groups. The pattern of *Wl* in normals indicate that the group tends to exclude all minor segments of the blots which are not entirely consonant with the abstraction. A high *Wl* in normals shows their meticulousness in perceiving things (Klopfer et al., 1954).

Small Usual Detail Responses (*d*)

Table 2 shows the patterns of *d* responses for the three groups. The frequency of *d*

is 15 (4.24%) in psychotic depressives, 19 (5.10%) in schizophrenics and 105 (8.83%) in normals. The mean values are 0.50, 0.63 and 3.50, respectively. These patterns suggest that normals produced a higher number of *d* responses as compared to the other groups. A high number of *d* responses in the normals show group's sharp perceptual articulation and interest in fine details (Rapaport, Gill & Schafer, 1980). The frequency of *d* responses in schizophrenics is better than the psychotic depressives but low than the normals. Occurrence of *d* responses in schizophrenics gives an indication of over ideation (Rapaport, Gill & Schafer, 1980).

Table 6 shows that three groups differ significantly on *d* responses $F(2,87) = 29.756, p < .0001$.

Tiny detail Responses (*dd*)

Table 2 indicates the patterns of *dd* responses for three groups. It indicates that the frequency of *dd* responses is 2 (0.56%) in psychotic depressives, whereas, these are absent in schizophrenics. Normals gave 34 (2.86%) *dd* responses. Mean values of these responses for two groups are 0.07 and 1.13 respectively. These response patterns indicate the presence of well defined articulation in normals which is quite low in psychotic depressives and absent in the protocols of schizophrenics.

Edge Detail Responses (*de*)

Table 2 shows the patterns of *de* responses for the three groups. The frequencies of

de is 3 (0.84%) in psychotic depressives, 6 (1.61%) in schizophrenics and 11 (0.92%) in normals. Their mean values are 0.10, 0.20 and 0.36 respectively for the three groups. Normals gave relatively a higher number of *de* responses, psychotic depressives the least and schizophrenics gave more responses than the psychotic depressives but less than normals. These patterns show the preponderance of *de* in the normals indicating their ability to see the profiles and it also reflects their fine articulation, whereas, in the schizophrenics *de* responses suggest presence of anxiety and inability to see things deeply.

Results in Table 8 , however, indicate that there is no significant difference between three groups, $F(2,87) = 1.936, p < .150$, on *de* responses.

Inside Detail Responses (*di*)

Table 2 shows the patterns of *di* responses for three groups. The frequencies of *di* responses is 18 (5.09%) in psychotic depressives, 12 (3.22%) in schizophrenics and 29 (2.44%) in normals. The mean values are 0.60, 0.40 and 0.96 respectively. These patterns indicate that normal group gave greater number of *di* responses, schizophrenics the least and psychotic depressives are falling in between the two groups. In the normals *di* responses are associated with good form level rating. Pattern of *d* responses in normals also indicates an anxious preoccupation about interpersonal relationships, whereas, in psychotic depressives *di* responses are not associated with good form level. However, the pattern of *di* responses in psychotic depressives indicates the presence of pathological thoughts.

Table 8 shows that three groups are significantly differing on *di* responses category, $F(2,87) = 3.200, p < .046$.

Rare Detail Response (*dr*)

Table 2 shows the patterns of *dr* responses for three groups. The frequencies of *dr* responses are 15 (4.24%) for psychotic depressives, 6 (1.61%) for schizophrenics and 34 (2.86%) for normals. The mean values are 0.50, 0.20 and 1.13 respectively. Table 2 shows normals gave highest number of *dr* responses, followed by psychotic depressives and schizophrenics. The pattern of *dr* in the normals reveal their perceptiveness and flexibility of approach, whereas, in psychotic depressives and schizophrenics *dr* responses are mostly associated with poor form responses. It indicates conspicuousness, lack of common sense and a negative attitude towards obvious.

The results in Table 9 indicate that three groups are significantly differing, $F(2,87) = 4.712, p < .01$, on *dr* response category.

White Space Response (*S*)

Table 2 shows the patterns of *S* responses for the three groups. The frequency of *S* is 17 (4.81%) in psychotic depressives, 1 (0.26%) in schizophrenics and 34 (2.86%) in normals. Their mean values are 0.57, 0.03 and 1.13 respectively. The pattern of *S* indicate that the normals gave highest number of *S* responses, followed by schizophrenics and psychotic depressives. A high *S* in normals may be taken as an indicator of oppositional tendencies in their intellectual sphere. In the psychotic depressives presence of *S* may be taken as an indicator of negativism (Klopfer et al., 1954).

The results in Table 10 show that three groups differ significantly on *S* responses, $F(2,87) = 11.000, p < .0001$.

Determinant Scores

Form Sum and Form Plus Responses (*F sum* & *F+*)

Table 2 shows the patterns of *F sum* and *F+* responses in three groups. The frequencies of *F sum* are 181 (51.27%) in psychotic depressives, 225 (60.48%) in schizophrenics and 759 (63.88%) in normals. The mean values are 6.03, 7.50 and 25.30 for the three groups respectively. Among these *F sum* responses the frequency of *F+* in psychotic depressives is 79 (22.40%), schizophrenics is 94 (25.26%), and the normals is 640 (53.87%) respectively. The corresponding mean values are 2.63, 3.10 and 21.33 respectively. The patterns of *F sum* and *F+* suggests that the normal group gave highest number of *F sum* and *F+* responses, psychotic depressives the lowest and schizophrenics are falling in between the two groups. A high pattern of *F+* in normals suggests their accuracy of perception and articulation, which is quite low in psychotic depressives and schizophrenics.

The results in Table 11 show that three groups differ significantly on *F+* responses, $F(2,87) = 55.011, p < .0001$.

Human Movement Responses (*M*)

Table 2 shows the patterns of *M* responses in the three groups. The frequency of *M* responses in psychotic depressives is 10 (2.83%), in schizophrenic is 17 (4.56%), and normals is 91 (7.65%). Their mean values are 0.33, 0.57 and 3.03 respectively.

Emerging patterns show that the highest number of *M* responses are given by normals, lowest by schizophrenics and psychotic depressives are falling in between the other two groups. High *M* responses in normals suggests their good interpersonal relationship and ability to empathizes with others, whereas, low *M* in psychotic depressives and schizophrenics show their weak and disjoint interpersonal relationship and poor adjustment (Klopfer et al.,1954).

Table 12 shows that differences between three groups are highly significant, $F(2,87) = 18.261, p < .0001$, on *M* responses.

Animal Movement Responses (*FM*)

Table 2 shows the patterns of *FM* responses in the three groups. The frequencies of *FM* are 17 (4.81%) in psychotic depressives, 31 (8.33%) in schizophrenics and 77 (6.48%) in normals respectively. The corresponding mean values are 0.57, 1.03 and 2.57. The emerging pattern of *FM* shows that the normals have significantly well differentiated need for impulse gratification as compared to psychotic depressives, whereas, schizophrenics are falling in between the two groups.

Table 13 shows that three groups differ significantly on *FM* responses, $F(2,87) = 6.591, p < .002$.

Inanimate Movement Response (*m*)

Table 2 shows the pattern of *m* responses in three groups. The frequency of *m* responses is 7 (1.88%) in schizophrenics and 19 (1.59%) in normals but are missing in psychotic depressives. The corresponding mean values are 0.23 and 0.63 respectively.

The normals gave much higher number of *m* responses as compared to schizophrenics. These patterns of *m* responses suggest that normals have much higher adjustive ability as compared to the schizophrenics. The absence of *m* in psychotic depressives may be related to their failure to control anxiety and tension, and poor adjustive control.

Inanimate Movement Responses In Combination of Form (*Fm/ mF*)

Table 2 shows the pattern of *Fm /mF* responses in three groups. The frequency of *Fm /mF* responses is 3 (0.80%) in schizophrenics and 5 (0.42%) in the normals and are missing in psychotic depressives. Their mean values are 0.10, 0.17 respectively. The patterns suggest relatively a higher number of *Fm /mF* responses in normals as compared to schizophrenics. It also suggests that the normals are able to control their tension and anxiety in an acceptable way and schizophrenics are finding it difficult, whereas, psychotic depressives are failing to do so.

Texture Responses In Combination With Form (*Fc /cF*)

Table 2 shows the pattern of *Fc /cF* responses in three groups. The frequency of *Fc /cF* is 2 (0.56%) in psychotic depressives, 2 (0.53%) in schizophrenics and 37 (3.11%) in normals. The corresponding mean values are 0.07, 0.07 and 1.23 respectively. The emerging pattern reveals the preponderance of *Fc /cF* responses in normals as compared to psychotic depressives and schizophrenics. A high *Fc /cF* in normals suggests their acceptance of need for affection, whereas, in psychotic depressives and schizophrenics it shows their lack of acceptance of need for affection.

However, results in Table 14 show that there is no significant difference between three groups, $F(2,87) = 1.036, p < .359$, on *Fc /cF* response category.

Form in Combination With Vista Responses (*FK*)

Table 2 shows the pattern of *FK* responses in three groups. The frequency of *FK* responses is 15 (4.24%) in psychotic depressives, 3 (0.80%) in schizophrenics and 8 (0.67%) in normals. Their corresponding mean values are 0.50, 0.10 and 0.27 respectively. The emerging pattern suggests relatively higher number of *FK* responses in psychotic depressives as compared to schizophrenics and normals. This pattern also suggests that psychotic depressives are trying to control and tolerate their anxiety, whereas, schizophrenics are finding it difficult. A low *FK* in the normals is indicative of presence of some kind of uncontrolled anxiety.

Table 15 indicates that between groups differences on *FK* responses are insignificant, $F(2,87) = 2.630, p < .078$.

***KF* Responses**

Table 2 shows the pattern of *KF* responses in three groups. The frequencies of *KF* responses are 3 (0.84%) in psychotic depressives, 4 (1.07%) in schizophrenics and 11 (0.92%) in normals. The mean values are 0.10, 0.13 and 0.37 respectively. The emerging pattern reveals greater number of *KF* responses in normals as compared to psychotic depressives and schizophrenics. Relatively higher *KF* responses in normals are indicative of their worry about affectional needs, whereas, psychotic depressives are showing lesser worry about affectional needs as compared to schizophrenics.

Results in Table 16 indicate that three groups are differing significantly, $F(2,87) = 8.237, p < .001$, on *KF* responses.

Vista Responses (*K*)

Table 2 shows the patterns of *K* responses in three groups. The frequencies of *K* are 1 (0.28%) in psychotic depressives, 1 (0.26%) in schizophrenics and 25 (2.10%) in normals. The corresponding mean values are 0.03 and 0.03 and 0.83 respectively. The emerging patterns of *K* responses reveal the presence of some kind of frustration of affectional needs in normals as compared to psychotic depressives and schizophrenics. A relatively low incidence of *K* in psychotic depressives and schizophrenics is indicative of their lack of acceptance of affectional needs and poor interpersonal relationship.

Table 17 indicates that differences on *K* responses are insignificant for three groups, $F(2,87) = .254, p < .776$.

Shading of Three Dimensional Effects Projected on Two Dimensions (*Fk /kF & k*)

Table 2 shows the pattern of *k sum* (*Fk /kF & k*) responses in three groups. The frequencies of *k sum* are 19 (5.38%) in psychotic depressives, 17 (4.56%) in schizophrenics and 4 (0.33%) in normals. Their corresponding mean values are 0.63, 0.56 and 0.14 respectively. The patterns reveal that *k sum* responses are highest in psychotic depressives followed by schizophrenics and normals. A high number of *k sum* responses in psychotic depressives show the presence of anxiety which is relatively low in schizophrenics. The pattern of *k sum* responses in the normals indicates their ambitious striving and good articulation which is not impaired with anxiety.

Table 18 shows that difference between three groups are insignificant, $F(2,87) = 3.00, p < .055$, on *k sum* response category.

Pure C Responses (C)

Table 2 shows the pattern of *C* responses in three groups. The frequencies of *C* responses are 6 (1.69%) in psychotic depressives, 13 (3.49%) in schizophrenics and 43 (3.61%) in normals. Their corresponding mean values are 0.20, 0.43 and 1.43 respectively. The emerging pattern of *C* reveals that these responses are highest in normals, lowest in psychotic depressives, whereas, schizophrenics are falling in between. A high incidence of *C* in normals shows their emotional reactivity to environment, whereas, low *C* in psychotic depressives reveals presence of stronger emotional inhibition as compared to schizophrenics.

Results in Table 19 indicate that three groups differ significantly on *C* response, $F(2,87) = 6.538, p < .002$.

Form Dominant Colour Responses (FC)

Table 2 shows the patterns of *FC* responses in three groups. The frequencies of *FC* responses are 19 (5.40%) in psychotic depressives, 3 (0.80%) in schizophrenics and 39 (3.28%) in normals. The mean values are 0.63, 0.10 and 1.30 respectively. The emerging pattern suggests that *FC* responses are highest in normals, followed by psychotic depressives and schizophrenics. Highest incidence of *FC* in normals suggests that their emotional reactivity to outer stimulation is greater as compared to psychotic depressives and schizophrenics. The incidence of *FC* in psychotic depressives is indicative of loosening of control and bizarre behaviour, whereas, in schizophrenics the pattern of *FC* suggests that the group is trying to make an effort to control impulsivity and acting out tendencies.

The results in Table 20 indicate that three groups differ significantly, $F(2,87) = 10.425, p < .0001$, on *FC* response category.

Colour Dominant Form Responses (*CF*)

Table 2 shows the pattern of *CF* responses in three groups. The frequencies of *CF* responses are 7 (1.98%) in psychotic depressives, 5 (1.34%) in schizophrenics and 5 (0.42%) in normals. The corresponding mean values are 0.23, 0.17 and 0.17 respectively. The emerging patterns reveal relatively higher number of *CF* in psychotic depressives as compared to schizophrenics and normals. The pattern of *CF* in psychotic depressives suggests their inadequate control as compared to schizophrenics, whereas, in the normals the pattern of *CF* may be taken as an indicator of spontaneity.

Table 21 shows that three groups are differing significantly on *CF* responses, $F(2,87) = 10.252, p < .0001$.

Arbitrary Form Colour Responses (*F/C, C/F*)

Table 2 shows the pattern of *F/C, C/F* responses in three groups. The frequencies of *F/C, C/F* responses are 3 (0.84%) in psychotic depressives, 7 (1.88%) in schizophrenics and 28 (2.35%) in normals. The corresponding mean values are 0.10, 0.23 and 0.43 respectively. The pattern reveals that highest number of, *F/C, C/F* responses are given by normals, lowest by psychotic depressives and schizophrenics are falling in between the two groups. The pattern of responses suggests controlled reactivity of normal's to emotional stimuli, whereas, in schizophrenics it reflects their controlled reactions to emotional stimuli as compared to psychotic depressives.

Results in Table 22 indicate that three groups are significantly differing on F/C , C/F response category, $F(2,87) = 9.445, p < .0001$.

Pure Achromatic Colour Responses (C')

Table 2 shows the patterns of C' responses in three groups. The frequency of C' responses are 22 (6.23%) in psychotic depressives 10 (2.68%) in schizophrenics and 10 (0.84%) in the normals. Their mean values are 0.73, 0.33 and 0.33 respectively. The emerging pattern reveals that majority of C' responses are given by psychotic depressives as compared to schizophrenics and normals. Incidence of high C' in psychotic depressives is indicative of strong uncontrolled depression and presence of morbid thoughts in the group, whereas, in schizophrenics pattern of C' shows anxiety and hesitant responsiveness. However, in the normals C' may be taken as an indicator of use of shading quality of cards in forming a percept.

Table 23 shows that differences between three groups are insignificant, $F(2,87) = 2.553, p < .084$, on C' response category.

Achromatic Colour Responses in Combination with Form ($FC'/C'F$)

Table 2 shows the pattern of $F'C/C'F$ responses in three groups. The frequency of $FC'/C'F$ responses is 48 (13.59%) in psychotic depressives, 15 (4.03%) in schizophrenics and 27 (2.27%) in normals. Their mean values are 1.60, 0.50 and 0.90 respectively. The emerging pattern shows that psychotic depressives gave much higher number of $FC'/C'F$ responses as compared to normals and schizophrenics. A high incidence of $FC'/C'F$ in psychotic depressives gives the indication of presence of stronger

hesitation of responsiveness to outer stimulation, whereas, the pattern of $FC' / C'F$ in schizophrenics indicates uncontrolled emotional reactivity to outer stimulation. In the normals presence of $FC' / C'F$ responses shows the use of shading qualities of cards, on the one hand, and presence of controlled responsiveness to environment on the other hand.

Results in Table 24 indicate that three groups are differing significantly, $F(2,87) = 8.871, p < .0001$, on $FC' / C'F$ response category.

Content Scores

Human Figure (*H*)

Table 2 shows the pattern of *H* responses in three groups. The frequencies of *H* responses are 17 (4.81%) in psychotic depressives 52 (13.97%) in schizophrenics and 67 (5.63%) in normals. Their mean values are 0.57, 1.73, and 2.23 respectively. The emerging pattern reveals that normals gave highest frequency of *H* responses, followed by schizophrenics and psychotic depressives. A high frequency of *H* responses in normals shows their interest in other individuals, whereas, the pattern of *H* responses in psychotic depressives shows their low interest in human beings. In schizophrenics the presence of *H* indicates disjoint interpersonal relationship which are lacking warmth.

Results in Table 25 show that three groups differ significantly on *H* response category, $F(2,87) = 8.352, p < .0001$.

Human Detail Responses (*Hd*)

Table 2 gives the patterns of *Hd* responses of three groups. The frequencies of *Hd* is 13 (3.68%) in psychotic depressives , 23 (6.18%) in schizophrenics and 93 (7.82%) in normals. The mean values are 0.43, 0.76 and 3.10 respectively. The emerging pattern shows that normals gave highest frequency of *Hd* responses, psychotic depressives the least and the schizophrenics are in between the two. A high incidence of *Hd* in normals is indicative of intellectualization tendencies of the group, whereas, in psychotic depressives *Hd* responses indicate the presence of depression and constrictive defence. *Hd* in schizophrenics may reflect presence of anxiety in the group.

Table 26 indicates that between group differences on *Hd* response category are highly significant, $F(2,87) = 19.578, p < .0001$.

Animal Responses (*A*)

Table 2 shows the patterns of *A* responses in three groups. The frequencies of *A* are 108 (30.59%) in psychotic depressives, 113 (30.37%) in schizophrenics and 325 (27.35%) in normals. The corresponding mean values are 3.60, 3.76 and 10.83 respectively. The emerging pattern shows that normals gave highest number of *A* responses followed by schizophrenics and psychotic depressives. A high *A* response in normals suggests their good adjustive abilities, whereas, the patterns of *A* responses in psychotic depressives indicate their poorer adjustive abilities as compared to schizophrenics.

Results in Table 27 show that three groups are differing significantly, $F(2,87) =$

40.570, $p < .0001$, on this response category.

Animal Detail Responses (*Ad*)

Table 2 shows the patterns of *Ad* responses in three groups. The frequencies of *Ad* are 6 (1.69%) in psychotic depressives, 11 (2.95%) in schizophrenics and 177 (14.89%) in normals. The mean values are 0.20, 0.36 and 5.90 respectively. The emerging pattern shows that normals gave highest number of *Ad* responses, psychotic depressives the least and schizophrenics are falling in between the two groups. The pattern of *Ad* in normals gives the indication of their intellectualization tendency, whereas, patterns of *Ad* responses in psychotic depressives and schizophrenics reveal presence of some kind of anxiety in these groups. This anxiety is greater in schizophrenics as compared to psychotic depressives.

Results in Table 28 show that differences between three groups are highly significant on *Ad* response category, $F(2,87) = 42.285$, $p < .0001$.

Human Anatomy Responses (*At*)

Table 2 shows the patterns of *At* responses in three groups. The frequencies of *At* responses are 31 (8.78%) in psychotic depressives, 17 (4.56%) in schizophrenics and 131 (11.02%) in normals. The mean values are 1.03, 0.57 and 4.37 respectively. The emerging pattern shows that normals gave highest number of *At* responses, schizophrenics the least and psychotic depressives are falling in between the two groups. The pattern of *At* responses in normals gives the indication of their feelings of intellectual adequacy, whereas, patterns of *At* responses in psychotic depressives and schizophrenics

reveal presence of generalized anxiety, body preoccupation and extreme blocking in these groups.

Results in Table 29 indicate that three groups differ significantly, $F(2,87) = 17.927$, $p < .0001$, on *At* response category.

Animal Anatomy Responses (*A At*)

Table 2 shows the patterns of *A At* responses in three groups. The frequencies of *A At* responses are 5 (1.41%) in psychotic depressives, 3 (0.80%) in schizophrenics and 2 (0.16%) in normals. The mean values are 0.17, 0.10 and 0.07 respectively. The emerging pattern shows that psychotic depressives gave relatively greater number of *A At* responses, followed by schizophrenics and normals. The pattern of *A At* responses in psychotic depressives gives an indication of their concern about the self and body preoccupation, whereas, pattern of *A At* responses in schizophrenics reveals presence of some kind of generalized anxiety and extreme blocking. In the normals presence of *A At* responses shows the presence of intellectualization tendency.

However, the results in Table 30 indicate that between group differences are insignificant, $F(2,87) = .630$, $p < .535$, on *A At* responses.

Object Responses (*Obj*)

Table 2 shows the patterns of *Obj* responses in three groups. The frequencies of *Obj* responses are 15 (4.24%) in psychotic depressives, 25 (6.72%) in schizophrenics and 82 (6.90%) in normals. The mean values are 0.50, 0.83 and 2.73 respectively. The emerging pattern shows that normals gave highest number of *Obj* responses, psychotic

depressives the least and schizophrenics are falling in between the two groups. The pattern of *Obj* responses in normals shows their well developed power of observation and breadth of ideas and also gives an indication of concern about self and body preoccupation, whereas, pattern of *Obj* responses in schizophrenics reveals their poor integration of reality and weaker power of observation.

Table 31 shows that three groups are significantly differing on *Obj* response category, $F(2,87) = 14.160, p < .0001$.

Nature Responses (*N*)

Table 2 shows the patterns of *N* responses in three groups. The frequencies of *N* responses are 19 (5.38%) in psychotic depressives, 14 (3.76%) in schizophrenics and 94 (7.91%) in normals. The mean values are 0.63, 0.47 and 3.13 respectively. The emerging pattern shows that normals gave highest number of *N* responses, followed by psychotic depressives and schizophrenics. The pattern of *N* responses in normals shows their well developed power of observation, interest in aesthetics and sensitivity to environment, whereas, pattern of *N* responses in schizophrenics reveals relatively weaker power of observation and loss of interest in environment as compared to psychotic depressives.

Results in Table 32 show that between group differences on *N* responses are highly significant, $F(2,87) = 22.760, p < .0001$.

Geography Responses (*Geo*)

Table 2 shows the patterns of *Geo* responses in three groups. The frequencies of *Geo*

responses are 6 (1.69%) in psychotic depressives, 5 (1.34%) in schizophrenics and 5 (0.42%) in normals. The mean values are 0.20, 0.17 and 0.17 respectively. The emerging pattern shows that psychotic depressives gave relatively greater number of *Geo* responses, as compared to schizophrenics and normals. The patterns of *Geo* responses in psychotic depressives and schizophrenics show their intellectual inadequacy, whereas, pattern of *Geo* responses in normals indicates that the group is trying to show off intellectually and are also trying to colour their real feelings.

Results in Table 33 show that between group differences of three groups are insignificant on *Geo* responses, $F(2,87) = .029, p < .971$.

Sexual Responses (*Sex*)

Table 2 shows the patterns of *Sex* responses in three groups. The frequencies of *Sex* responses are 32 (9.06%) in psychotic depressives, 14 (3.76%) in schizophrenics and 22 (1.85%) in normals. The mean values are 1.07, 0.47 and 0.73 respectively. The emerging pattern shows that psychotic depressives gave highest number of *Sex* responses, schizophrenics the least and normals are between the two. The pattern of *Sex* responses in psychotic depressives and schizophrenics are taken as an indicator of presence of pathological thoughts. Preoccupation of *Sex* responses in psychotic depressives also indicates their sexual disturbance, whereas, pattern of *Sex* responses in normals indicates that the group is showing their concern and interest about sexual contents.

However, the results in Table 34 show that differences of three groups are insignificant, $F(2,87) = .827, p < .441$, on *Sex* responses.

Eruption Responses (*Eru*)

Table 2 shows the patterns of *Eru* responses in three groups. The frequencies of *Eru* responses are 2 (0.56%) in psychotic depressives, 1 (0.26%) in schizophrenics and 6 (0.50%) in normals. The mean values are 0.07, 0.43 and 0.20 respectively. The emerging pattern shows that schizophrenics gave relatively highest number of *Eru* responses, as compared to psychotic depressives and normals. The pattern of *Eru* responses in schizophrenics shows the presence of acting out tendencies in the group, whereas *Eru* responses in psychotic depressives indicate the presence of anxiety in the group. However, *Eru* responses in normals are taken as an indicator of intellectualization tendencies.

The results in Table 35 indicate that differences of three groups are insignificant on *Eru* responses, $F(2,87) = 1.475, p < .181$.

Plant Responses (*Pl*)

Table 2 shows the patterns of *Pl* responses in three groups. The frequencies of *Pl* responses are 17 (4.81%) in psychotic depressives, 14 (3.76%) in schizophrenics and 51 (4.29%) in normals. The mean values are 0.57, 0.47 and 1.70 respectively. The emerging pattern shows that normals gave relatively highest number of *Pl* responses, followed by psychotic depressives and schizophrenics. The pattern of *Pl* responses in psychotic depressives shows sensitivity and uncontrolled use of colour in determining the response, whereas, *Pl* responses in schizophrenics are generally found with weak form, indicating presence of anxiety in the group. Presence of *Pl* responses in normals are taken as an important indicator of breadth of observation and well developed aesthetic

sense.

The results in Table 36 show that three groups are differing significantly on *PI* response category, $F(2,87) = 7.601, p < .001$.

Blood Responses (*Bl*)

Table 2 shows the patterns of *Bl* responses in three groups. The frequencies of *Bl* responses are 3 (0.84%) in psychotic depressives, 4 (1.07%) in schizophrenics and 22 (1.85%) in normals. The mean values are 0.10, 0.13 and 0.73 respectively. The emerging pattern shows that normals gave relatively highest number of *Bl* responses, psychotic depressives the least and schizophrenics are in between the two groups. The patterns of *Bl* responses in psychotic depressives and schizophrenics show their uncontrolled use of colour in determining the response and emotionality. Presence of *Bl* responses in normals show aggression and these responses to some extent are found in the protocols of normals as well.

Table 37 shows that normals three groups are differing significantly, $F(2,87) = 7.530, p < .001$, on *Bl* response category.

Reflection Form Responses (*rF*)

Table 2 shows the patterns of *rF* responses in three groups. The frequencies of *rF* responses are 4 (1.13%) in psychotic depressives, 16 (4.30%) in schizophrenics and 13 (1.09%) in normals. The mean values are 0.13, 0.53 and 0.43 respectively. The emerging pattern shows that schizophrenics gave relatively highest number of *rF*

responses, psychotic depressives the least and normals are in between the two groups. The pattern of rF responses in schizophrenics is indicative of presence of pathological thoughts in the group, whereas, pattern of rF responses in psychotic depressives shows distorted thought process in the group. In the normals, most of rF responses are related to the symmetry of the blot. rF responses in normals also indicate an emphasis on role playing which is taken as indicator of good adjustment.

However, the results in Table 38 show that differences between three groups are insignificant on rF response category, $F(2,87) = 2.674, p < .075$.

Reflection Responses (r)

Table 2 shows the patterns of r responses in three groups. The frequencies of r responses are 2 (0.56%) in psychotic depressives, 5 (1.34%) in schizophrenics and 22 (1.85%) in normals. The mean values are 0.06, 0.17 and 0.73 respectively. The emerging pattern shows that normals gave highest number of r responses, followed by schizophrenics and psychotic depressives. The patterns of r responses in psychotic depressives and schizophrenics are indicative of the presence of pathological thoughts. In the normals most of r responses are related to the symmetry of the blot. r responses in normals show an emphasis on role playing which is taken as an indicator of good adjustment.

Results in Table 39 indicate that three groups differ significantly on r responses, $F(2,87) = 6.761, p < .002$.

Mask and Pair Responses [*Msk*, (2)]

Table 2 shows that mask (*MSK*) responses are absent in psychotic depressives and schizophrenics and are only found in normals with the frequency of 1 (0.80%). Similarly, pair responses (2) are absent in schizophrenics and normals and are only found in psychotic depressives with the frequency of 1 (0.28%). This response category is needed for computing critical and distinguishing categories of Rorschach.

X-ray Responses (*X-ray*)

Table 2 shows the patterns of *X-ray* responses in three groups. The frequencies of *X-ray* responses are 9 (2.54%) in psychotic depressives, 2 (0.53%) in schizophrenics and 3 (0.25%) in normals. The mean values are 0.30, 0.06 and 0.10 respectively. The emerging pattern shows that psychotic depressives gave higher number of *X-ray* responses as compared to schizophrenics and normals. *X-ray* responses in psychotic depressives indicate their introversive tendencies, whereas, the low frequency of *X-ray* responses in schizophrenics is indicative of presence of anxiety in this group. In normals pattern of *X-ray* indicates presence of a need for indepth probe in the psyche of the group. However, the results of

Table 40 shows that no group is found differing significantly, $F(2,87) = 1.265$, $p < .287$, on *X-ray* response category.

Fire Responses (*Fi*)

Table 2 shows the patterns of *Fi* responses in three groups. The frequencies of *Fi*

responses are 4 (1.13%) in psychotic depressives, 1 (0.26%) in schizophrenics and 4 (0.33%) in normals. The mean values are 0.13, 0.03 and 0.13 respectively. The emerging pattern shows that psychotic depressives and normals gave higher number of *Fi* responses as compared to schizophrenics. *Fi* responses in psychotic depressives indicate uncontrolled affective reaction, whereas, the low frequency of *Fi* responses in schizophrenics is indicative of presence of anxiety and inhibition. In normals pattern of *Fi* responses indicate aggression and labile use of colour in giving these responses.

However, results in Table 41 show that between group differences are insignificant, $F(2,87) = .437, p < .647$, on *Fi* response category.

Colour Responses (*Col*)

Table 2 shows the patterns of *Col* responses in three groups. The frequencies of *Col* responses are 12 (3.39%) in psychotic depressives, 8 (2.15%) in schizophrenics and 26 (2.18%) in normals. The mean values are 0.40, 0.27 and 0.86 respectively. The emerging pattern shows that normals gave highest number of *Col* responses, schizophrenics the least and psychotic depressives are falling in between the two groups. Colour responses in psychotic depressives and schizophrenics indicate uncontrolled emotionality, whereas, a high incidence of *Col* in normals is indicative of their emotional reactivity to outer stimulation.

Results in Table 42 indicate that three groups are differing significantly on *Col* response category, $F(2,87) = 3.673, p < .029$.

Architectural Responses (*Arch*)

Table 2 shows the patterns of *Arch* responses in three groups. The frequencies of *Arch* responses are 4 (1.13%) in psychotic depressives, 4 (1.07%) in schizophrenics and 8 (0.67%) in normals. The mean values are 0.13, 0.13 and 0.26 respectively. The emerging pattern shows that normals gave relatively a higher number of *Arch* responses as compared to psychotic depressives and schizophrenics. The pattern of *Arch* responses in psychotic depressives and schizophrenics reveal paranoid ideation in these groups, whereas, a high incidence of *Arch* in normals is indicative of their interest in aesthetics and it is also related to their reactivity to outer stimulation.

The results in Table 43 show that no group is differing significantly on *Arch* response category, $F(2,87) = .577, p < .564$.

Super Natural Human Responses [(*H*)]

Table 2 shows the patterns of (*H*) responses in three groups. The frequencies of (*H*) responses are 9 (2.54%) in psychotic depressives, 17 (4.56%) in schizophrenics and 13 (1.09%) in normals. The mean values are 0.30, 0.57 and 0.43 respectively. The emerging pattern shows that schizophrenics gave relatively a higher number of (*H*) responses as compared to psychotic depressives and normals. The patterns of (*H*) responses in psychotic depressives and schizophrenics reveal the presence of paranoid ideation which is mostly related with the perception of fairies, ghosts, monsters on the cards. The incidence of (*H*) responses in normals is mostly related to their creative and imaginative thinking.

However, the results in Table 44 show that differences in three groups are insignificant on (*H*) response category, $F(2,87) = .334, p < .710$.

Flag Responses (*Fl*)

Table 2 shows the patterns of *Fl* responses in three groups. The frequencies of *Fl* responses are 3 (0.80%) in schizophrenics, 11 (0.92%) in normals and are absent in psychotic depressives. The mean values are 0.10 and 0.36 respectively. The emerging pattern shows that normals gave relatively a higher number of *Fl* responses as compared to schizophrenics. The pattern of *Fl* responses in normals is taken as an indicator of their need for achievement, whereas, in schizophrenics it is related to paranoid ideation.

Art Responses (*Art*)

Table 2 shows the patterns of *Art* responses in three groups. The frequencies of *Art* responses are 5 (1.41%) in psychotic depressives, 3 (0.80%) in schizophrenics and missing in normals. The mean values are 0.17 and 0.10 respectively. The emerging patterns show that psychotic depressives gave relatively higher number of *Art* responses as compared to schizophrenics. The patterns of *Art* responses in psychotic depressives and schizophrenics reveal their paranoid ideation which is associated with poor form level.

Morbid Contents (*MOR*)

Table 2 shows the patterns of *MOR* responses in three groups. The frequencies of

human depression (*dep*) responses are 5(1.41%) in psychotic depressives with mean value of 0.17, whereas, it is missing in schizophrenics and normals. The content of destruction (*de*) is 9 (2.54%) in psychotic depressives and 4 (1.07%) in schizophrenics and missing in normals. The mean values are 0.30 and 0.13 respectively. The contents of generalized depression (*Dep*) are 5 (1.41%) in psychotic depressives and 1 (0.26%) in schizophrenics, whereas, these are missing in normals. Their mean values are 0.17 and 0.03 respectively. Table shows that *MOR sum* is 19 (5.49%) in psychotic depressives and 5 (1.34%) in schizophrenics. The emerging pattern shows that psychotic depressives gave relatively higher number of *MOR* responses as compared to schizophrenics.

Form Level Rating (*FLR*)

Table 1 shows the patterns of *FLR* responses in three groups. The ratios of *FLR+ :FLR-* responses are 67:286 in psychotic depressives, 125:247 in schizophrenics and 835:353 in normals. Their relative ratios are 0.2:1, 0.5:1 and 2:1 respectively. The emerging pattern shows that normals gave a highest number of *FLR+* responses as compared to psychotic depressives and schizophrenics, whereas, schizophrenics gave highest *FLR-* responses, followed by psychotic depressives and normals. The majority of the responses of normals are thus with the positive form level rating which indicate accuracy of perception, whereas, majority of the responses of psychotic depressives and schizophrenics which of negative form level rating which show their disjoint and distorted perception.

Popular-Original Responses (*P:O*)

Table 1 shows that pattern of *P:O* responses in three groups. The ratios of *P:O*

responses are 67:286 in psychotic depressives, 71:301 in schizophrenics and 185:1003 in normals. Their corresponding relative ratios are 1:4, 1:4 and 1:5 respectively. The emerging pattern shows that normals gave a highest proportion of *P:O* responses as compared to psychotic depressives and schizophrenics. The majority of the *P:O* responses of normals are thus with the positive form level rating. This indicates their conformity and originality, whereas, majority of the *P:O* responses of psychotic depressives and schizophrenics are of negative form level rating showing their distorted perception and poor integration of reality. Weak *P:O* in these clinical groups also suggests their passive attitude.

Pattern of Responses of Psychotic Depressives on Distinguishing and Critical Categories of Rorschach

Table 45 shows the pattern of responses of psychotic depressives on distinguishing and critical categories of Rorschach. The data in Table 45 show that the psychotic depressives gave 117 (33.14%) *W's* responses and 156 (44.20%) *D* responses. It appears that the group gave more *D* responses as compared to *W's*. The pattern of *W's* reflect the organizational and integrating abilities of an individual, whereas, *D* responses reflect one's interest in the obvious. The pattern of *W's* and *D* suggests weaker organizational abilities of psychotic depressives. Similarly, *d* responses reflect good articulation. Table 45 shows that occurrence of *d* responses in psychotic depressives is 15 (4.24%), which suggests presence of weak articulation in psychotic depressives. Table 45 also shows that psychotic depressive group gave a number of *Dd+S* responses which are 55 (15.58%). Pattern of *Dd+S* responses in psychotic depressives also implies that ideational symptoms are prominent in psychotic depressives. The data in Table 45 show that the frequency of *F Sum* responses is 181 (51.27%) in psychotic depressives with 79 (22.40%) of *F Sum* responses. In terms of distinguishing categories of content scores it appears that psychotic depressives gave more contents of *A* in their responses as compared to other response categories. Table 45 also shows that *Sex* responses are 32 (9.06%) in psychotic depressives. The pattern of *Sex* responses in psychotic depressives suggests pathological indication in the group. Similarly, Table 45 suggests that *X-ray* responses are 9 (2.55%) in psychotic depressives. These kind of responses indicate anxiety which is mostly related to depression. Table 45 also indicates the percentage of *A* which is 108 (30.59%) in psychotic depressives. Pattern of *A* in psychotic depressives indicates low intelligence, compulsive rigidity and depression in the group.

Table 45 also presents the patterns of responses of psychotic depressives on critical categories. It shows that frequency of *V* responses is 19 (5.38%) in psychotic depressives. The pattern of *V* in psychotic depressives suggests presence of painful experiences and suicidal potentials. Table 45 gives the Ego-centricity (*EC*) index to be 0.05 in psychotic depressives. Studies have indicated that a low *EC* index is found in the protocols of withdrawn individuals (Exner, 1974). The same table shows that frequency of *C'* is 70 (19.83%) in psychotic depressives. Generally, *C'* category of responses include toned-down hesitant responsiveness to external stimuli (Rapaport, Gill & Schafer, 1980). The pattern of *C'* responses in psychotic depressives suggest that their responsiveness to outside stimulation has been interfered by some kind of traumatic experience which is resulting in withdrawal. If *C'* occur with low incidence of *FC* responses then it indicates depression in most of the cases. Table 45 also shows that psychotic depressives gave 19 (5.40%) *FC* responses. The pattern of *FC* responses of psychotic depressives indicate their inhibition and weakness to their object of attachment. Table 45 further shows that psychotic depressives gave a total of *R* average of 353 with an average of 11.76 responses, which is quite below the criterion of 17-27 *R* (Exner, 1974). A low *R* is a clear and definite sign of depression and inhibition (Rapaport, Gill & Schafer, 1980), which seems true in the case of our sample of psychotic depressives. Table 45 shows that *M:SumC* is 10:26 in psychotic depressives. The relative ratio is 1:3. According to Rapaport, Gill, and Schafer (1980) "as generally speaking *SumC* exceeding *M* emphasizes a pathological increase in affective output and display which is often inappropriate, usually, a loss of delay for reality" (p. 156). Table 45 indicates that *Afr* is 104/ 1-249 in psychotic depressives with a mean value of 0.41. The pattern of *Afr* of psychotic depressives falls within the cut off point of $< .55$ (Viglione, Brager, & Haller, 1988), suggesting low responsiveness of psychotic depressives to emotional stimuli.

Pattern of Responses of Schizophrenics on Distinguishing and Critical Categories of Rorschach

Table 46 shows the Pattern of responses of schizophrenics on distinguishing categories of Rorschach. Table 46 shows that frequency of *W's* responses is 126 (33.80%) in schizophrenics. *W's* reflects the organizational and integrating abilities of an individual, whereas, *D* responses reflect one's interest in the obvious. The data in Table 46 show that the schizophrenics gave more *D* 190 (51.0%) responses as compared to *W* responses 126 (33.8%). This pattern suggests group's interest in obvious and weaker organizational abilities. Similarly, *d* responses reflect good articulation. The same table also shows that occurrence of *d* responses is 19 (5.1%) in schizophrenics. The pattern of *d* in schizophrenics suggests presence of weak articulation. Table 46 shows that schizophrenics gave a frequency of 25 (6.72%) *Dd+S* responses. The pattern of *Dd+S* responses in schizophrenics also show that ideational symptoms are prominent in schizophrenics. The frequency of *F+* in the same table is 94 (25.2%) in schizophrenics.

Table 46 indicates that frequency of *Sum C* is 31 (8.3%) in schizophrenics. The pattern of *Sum C* in schizophrenics gives an indication of their loss of interest in outer stimulation. Table 46 shows that schizophrenics gave a frequency of 301 (80.9%) of original (*O*) responses. This pattern suggests that the group is low on originality of thoughts and ideas.

Table 46 presents the patterns of responses of schizophrenics on critical categories. The table shows that frequency of *W-* responses is 72 (19.35%) in schizophrenics. The pattern of *W-* in schizophrenics suggests chronicity of illness and their deterioration. *W-* greater or equal than 2% are an important diagnostic indicator of schizophrenia

(Rapaport, Gill & Schafer, 1980). Table 46 shows that frequency of *weak FLR* is 301 (80.91%) in schizophrenics. The pattern of *weak FLR* also suggests distortion of thoughts in this group. Generally, an outstanding high number of *weak FLR* are found in the protocols of schizophrenics (Schafer, 1954). The data in Table 46 indicates that frequency of (*M-*) responses is 17 (4.56%) in schizophrenics. These responses have greater pathological weight as these indicate one's lower level of endowment. Similarly, Table 46 indicates the frequency of (*M-*)...*Hd* responses in schizophrenics is 8 (2.15%). This response category suggests group's paranoid inclination. Table 46 shows that frequency of *CF+C* responses is 18 (4.83%) in this group. A high number of *CF+C* responses in schizophrenics suggest groups' increase impulsiveness and poor control of effects. Table 46 also shows the pattern of *Pure C (C)* responses in the group which is 13 (3.49%). Abundance of *Pure C (C)* responses of schizophrenics indicates the presence of acting out tendencies in this group. The data in Table 52 show that schizophrenics gave 16 (4.30%) contamination (*Cont*) responses and 6 (1.61%) confabulation (*Conf*) responses. The patterns of *Cont* and *Conf* responses suggest distortion of thought and language in schizophrenics which is revealed in the form of deviant verbalization, inappropriate combinations, autistic logic and a large number of sex responses.

Pattern of Responses of Normals on Distinguishing and Critical Categories of Rorschach

Table 47 shows the frequency of *R* responses of normals which is 835 (70.30%), whereas, the frequencies of *W*, *D*, *d*, and *Dd+S* are 286 (24.07%), 655 (55.13%), 105 (8.83%) and 142 (11.95%) respectively. Indicators of balanced intellectual approach are 20-30% *W*, 45-55% *D*, 5-15% *d*, and less than 10% *Dd+S* (Klopfer & Davidson, 1962). The emerging patterns of these scoring categories in normals suggest that all of these responses are falling in the normal range except the scores of the subjects on *Dd+S* responses. These scores are slightly greater than the normal expectancy. Table 47 also shows that the frequencies of *F* sum and *F+* responses in the normals are 759 (63.88%) and 640 (53.87%) respectively. These are form determined responses which show subjects intellectual control and accuracy of perception. The data in Table 47 also show that the frequency of original responses (*O*) is 1003 (84.42%) in the normals. A high (*O*) in normals suggests superiority and originality of thought. Table 47 also shows the pattern of scores of normals on *Sex*, *X-ray* and *A* responses, which are 22 (1.85%), 3 (0.25%) and 325 (27.35%) respectively. *Sex* responses may appear in uninhibited individuals, however, these are often taken as an indicator of pathological orientation. In our normal subjects these responses may be generally related to their manifestations of fantasies and wishful thinking. However, most of these responses are of positive form level rating, whereas, *X-ray* responses in normals may be taken as an indicator of their need for indepth probe in themselves. The pattern of *A* responses in normals are within the normal range, which according to Klopfer et al. (1954) constitute 40% of normals responses.

The data in Table 47 also show the scores of normals on the critical categories. The

scores of *V*, *EC*, *C'*, *MOR sum*, *EB*, *FC*, *R* average and *Afr* responses are 44 (3.70%), 3x35+(0)/1188 (0.08%), 37 (3.11%), --, 91:100 (1:1), 39 (3.30%), 1188 (40.00), and 406/1-782 (0.52%) in normals. *V* responses in the normals are fewer in number which indicate that the group has made use of shading as determinant while responding to the cards. The data in Table 47 show that *EC* responses of normals are 0.08%. The *EC* index in the normals shows presence of ego-centricity and interest in themselves. The data in Table 47 also indicate that *MOR sum* responses are absent in the normals. The non-prevalence of *MOR sum* in normals indicates well adjusted healthy personalities. It also implies that the themes of death, decay and destruction are absent in the protocols of normals. Table 47 also shows the pattern of *C'* responses in the normals. However, it appears that *C'* responses of normals are accompanied with many *C* responses in their protocols. According to Klopfer and Davidson (1962) " normals seem to be extending their colour receptivity and implying a rich varied reactions to all kinds of stimuli presented in the blots" (p. 138).

The data in Table 47 indicate a highly balanced *EB* in the normals, this suggests that normals are not only responding to the demands of within but also reacting freely to the outer stimulation. Similarly, the pattern of *FC* responses of normals shows their controlled but ready responsiveness to emotional impact. Table 47 shows that normals gave a high number of *R* average, which indicates that the group is highly productive and intelligent. Table 47 shows that *Afr* ratio of the normals is quite low, which implies groups' controlled reactivity and responsiveness to outer stimulation.

Table 47 also give the scores of normals on the indicators of schizophrenia. These include the scores of *W-*, weak *FLR*, (*M-*), (*M-*) ...*Hd*, *CF+C*, Pure *C* (*C*), *Cont* and *Conf* which are 30 (2.52%), 35 (2.94%), 13 (1.09%), 2 (0.16%), 48 (4.04%), 43

(3.61%), 3 (0.25%), and 2 (0.16%) respectively. The prevalence of *W-*, weak *FLR*, and (*M-*) and (*M-*)...*Hd* scores in the normals indicates that the group has weaker organizational abilities. Similarly the pattern of *CF+C* and Pure *C* (*C*) responses in normals indicate those unsuccessful attempts of normals to manipulate an emotional situations by realistic means. Table 47 shows that the frequency of *Cont* and *Conf* responses in normals is quite low. The pattern of these category of responses imply that the group is generally making good use of blot material.

PATTERN SUMMARY

Patterns of Responses of Psychotic Depressives, Schizophrenics and Normals on Rorschach

Table 48 shows that the three groups of psychotic depressives, schizophrenics and normals are showing distinct patterns on various location, determinant and content scores. Table 48 shows that the frequency of *R+* is 126 (35.69%) in psychotic depressives, 125 (33.60%) in schizophrenics and 835 (70.28%) in normals respectively. The mean values are 4.20, 4.16 and 27.80 for these three groups. The emerging pattern shows that normals gave highest *R+* responses, followed by psychotic depressives and schizophrenics. The emerging patterns of *R+* of schizophrenics and psychotic depressives show perceptual inaccuracy and their disjointed personalities, whereas, the pattern of *R+* in the normals is indicative of a normal healthy personality. Haque (1985) has reported a mean value of *R+* as 11.46 for his schizophrenic adults, whereas, Mahmood (1987) has found a mean value of 45.38 for his schizophrenic subjects. It appears that the mean *R+* responses of our sample of schizophrenics is lower than the mean *R+* of schizophrenics of other two researchers. The mean values of *R+* responses of normals samples of Haque (1985), Mahmood (1987), Farooqi (1987) and Jaleel (1990) are 12.57, 74.75, 41.78 and 22.07 respectively. A comparison between our and that of other researcher's samples reveals that *R+* responses of our normals are more than the samples of Haque (1985) and Jaleel (1990), whereas, mean *R+* of our normals are less than those reported by Farooqi (1987) and Mahmood (1987).

The data in Table 48 show that the frequency of *W's* is 117 (33.14%) in psychotic depressives, 126 (33.87%) in schizophrenics and 286 (24.07%) in normals respectively.

The mean values are 3.90, 4.20, and 9.53 for the three groups. The emerging pattern shows that normals gave highest *W* responses, psychotic depressives the least and schizophrenics are falling in between the two groups. High *W*'s in normals reveal their well developed organizational abilities, whereas, the patterns of *W*'s show the presence of a greater degree of loosening of control in psychotic depressives as compared to schizophrenics. Haque (1985) has reported a mean value of *W* as 0.06 for his schizophrenic adults, whereas, Mahmood (1987) has found a mean value of 73.14 for his schizophrenic subjects. It appears that the mean *W* responses of our sample of schizophrenics are showing an increase as compared to Haque's (1985) sample, whereas, these are lower than the mean *W* of Mahmood's (1987) sample. Mean values of *W* responses of normals of the samples of Haque (1985), Mahmood (1987), Farooqi (1987) and Jaleel (1990) are 6.69, 32.38, 8.08 and 8.18 respectively. A comparison between our sample and samples of other researchers reveals that *W* responses of our normals are greater than the samples of Haque (1985), Farooqi (1987) and Jaleel (1990), whereas, mean *W* of our normals is less than that reported by Mahmood (1987).

Table 48 shows that frequency of *D* is 156 (44.19%) in psychotic depressives, 190 (51.07%) in schizophrenics and 655 (55.13%) in normals respectively. The mean values are 5.2, 6.3 and 21.83 for these three groups. The emerging pattern shows that normals gave highest *D* responses, followed by schizophrenics and psychotic depressives. The pattern of *D* indicates well developed perceptual abilities of the normals, whereas, these are found to be weak in psychotic depressives as compared to schizophrenics. Haque (1985) has reported a mean value of *D* as 2.74 for his schizophrenic adults, whereas, Mahmood (1987) has found a mean value of 20.35 for his schizophrenic subjects. It appears that the mean *D* responses of our sample of schizophrenics are showing an increase as compared to Haque's (1985) sample, whereas, these responses are lower than

the mean D of Mahmood's (1987) sample. Mean values of D responses of normals of the samples of Haque (1985), Mahmood (1987), Farooqi (1987) and Jaleel (1990) are 4.78, 53.83, 23.0 and 42.98 respectively. A comparison between sample of our study and that of other researchers' reveals that D responses of our normals are greater than the samples of Haque (1985) and Farooqi (1987), whereas, mean D of our normals is less than those reported by Mahmood (1987) and Jaleel (1990).

Results in Table 48 show that the frequency of d is 15 (4.24%) in psychotic depressives, 19 (5.10%) in schizophrenics and 105 (8.83%) in normals respectively. The mean values are 0.50, 0.63 and 3.50 for these three groups. The emerging pattern shows that normals gave highest d responses, psychotic depressives the least and schizophrenics are falling in between the two. The pattern of d responses suggests accuracy and certainty of perception in the normals, whereas, it indicates the presence of greater feelings of insecurity in psychotic depressives as compared to schizophrenics. Haque (1985) has reported mean value of d as 0.60 for his schizophrenic adults, whereas, Mahmood (1987) has found a mean value of 2.81 for his schizophrenic subjects. It appears that the mean d responses of our sample of schizophrenics are equal to Haque's (1985) sample, whereas, these responses are lower than the mean d of Mahmood's (1987) sample. Mean values of d responses of normals of the samples of Haque (1985), Mahmood (1987), Farooqi (1987) and Jaleel (1990) are 0.42, 5.27, 4.17 and 4.07 respectively. A comparison between our sample and that of other researchers sample reveals that mean d responses of our normals are greater than the samples of Haque (1985), Mahmood (1987), Farooqi (1987) and Jaleel (1990).

Table 48 shows that the frequency of $Dd+S$ responses is 55 (15.58%) in psychotic depressives, 25 (6.72%) in schizophrenics and 142 (11.95%) in normals respectively.

The mean values are 1.83, 0.83 and 4.73 for these three groups. The emerging pattern shows that normals gave highest *Dd+S* responses, schizophrenics the least and psychotic depressives are falling in between as compared to other two groups. A high *Dd+S* in normals is showing their ego strength and self-assertion, whereas, *Dd+S* responses suggest a greater bizarre responsiveness of schizophrenics as compared to psychotic depressives. Haque (1985) has reported a mean value of *Dd+S* as 6.70 for his schizophrenic adults, whereas, Mahmood (1987) has found a mean value of 3.30 for his schizophrenic subjects. It appears that the mean *Dd+S* responses of our sample of schizophrenics are lower than mean *Dd+S* responses of the samples of Haque (1985) and Mahmood (1987). Mean values of *Dd+S* responses of normals of the samples of Haque (1985), Mahmood (1987), Farooqi (1987) and Jaleel (1990) are 8.50, 8.93, 4.94 and 2.99 respectively. Mean *Dd+S* responses of our normals is higher than the samples of Jaleel (1990), whereas, it is lower than those reported by Haque (1985), Mahmood (1987) and Farooqi (1987).

The data in Table 48 show that the frequency of *F Sum* responses is 181 (51.27%) in psychotic depressives, 225 (60.48%) in schizophrenics and 759 (63.88%) in normals respectively. The mean values are 6.03, 7.50 and 25.30 for the three groups. The emerging pattern shows that normals gave highest *F Sum* responses, followed by schizophrenics and psychotic depressives. Higher *F Sum* responses in normals show their well developed intellectual control, whereas, these indicate a weaker intellectual control and ego strength in schizophrenics as compared to psychotic depressives. Haque (1985) has reported a mean value of *F Sum* responses as 6.70 for his schizophrenic adults. The mean *F Sum* responses of our sample of schizophrenics is greater than the mean of Haque's (1985) sample. Mean values of *F Sum* responses of normals of the samples of Haque (1985), Farooqi (1987) and Jaleel (1990) are 8.51, 24.61 and 12.42 respectively.

A comparison between our sample and the samples of other researchers reveals that mean *F Sum* responses of our normals are greater than those reported for the samples of Haque (1985), Farooqi (1987) and Jaleel (1990).

Results in Table 48 indicate that the frequency of *F+* responses is 79 (22.37%) in psychotic depressives, 94 (25.26%) in schizophrenics and 640 (53.87%) in normals respectively. The mean values are 2.63, 3.13 and 21.33 for the three groups. The emerging pattern shows that normals gave highest *F+* responses, as compared to schizophrenics and psychotic depressives. A high *F+* in normals suggests accuracy of form perception, whereas, it indicates a weaker and bizarre perceptual responsiveness of psychotic depressives as compared to schizophrenics. Haque (1985) has reported a mean value of *F+* responses as 43.57 for his schizophrenic adults, whereas, Mahmood (1987) has found a mean value of 33.80 of *F+* responses for his schizophrenic sample. It appears that the mean *F+* responses of our sample of schizophrenics are lower than the mean *F+* of the samples of Haque (1985) and Mahmood. Mean values of *F+* responses of normals of the samples of Haque (1985), Mahmood (1987), Farooqi (1987) and Jaleel (1990) are 66.50, 68.30, 22.52 and 71.85 respectively. A comparison between our sample and the samples of other researchers reveals that mean *F+* responses of our normals are lower to those reported for the samples of Haque (1985), Farooqi (1987), Mahmood (1987) and Jaleel (1990).

The data in Table 48 indicate that the frequency of *SumC* responses is 26 (7.36%) in psychotic depressives, 31 (8.33%) in schizophrenics and 100 (8.41%) in normals respectively. The mean values are 0.86, 1.03 and 3.33 for these three groups. The emerging pattern shows that normals gave highest *SumC* responses, psychotic depressives the least and schizophrenics are falling in between the two groups. The pattern of *SumC*

in normals suggests their reactivity to outer stimulation, whereas, it indicates a poorer responsiveness of psychotic depressives as compared to schizophrenics. Haque (1985) has reported a mean value of *SumC* responses as 1.71 for his schizophrenic adults, whereas, Mahmood (1987) has found a mean value of 2.36 of *SumC* responses for his schizophrenic sample. It appears that the mean *SumC* responses of our sample of schizophrenics are lower than the mean *SumC* of the samples of Haque (1985) and Mahmood. Mean values of *SumC* responses of normals of the samples of Haque (1985), Mahmood (1987), Farooqi (1987) and Jaleel (1990) are 0.46, 0.88, 4.08 and 1.81 respectively. It seems that mean *SumC* responses of our normals are greater than the sample of Farooqi (1987), whereas, mean *SumC* of our normals is lower than those reported in the samples of Haque (1985), Mahmood (1987) and Jaleel (1990).

Table 48 indicates that the frequency of *O* responses is 286 (81.01%) in psychotic depressives, 301 (80.91%) in schizophrenics and 1003 (84.42%) in normals respectively. The mean values are 9.53, 10.03 and 33.40 for the three groups. The emerging pattern shows that normals gave highest *O* responses, psychotic depressives the least and schizophrenics are falling in between as compared to other two groups. The pattern of *O* responses in normals suggests creativity and originality, whereas, it indicates a greater pathology and lowered individuality in depressives as compared to schizophrenics. Haque (1985) has reported a mean value of *O* responses as 0.34 for his schizophrenic adults. It appears that the mean *O* responses of our sample of schizophrenics are showing an increase as compared to those reported by Haque (1985). Mean value of *O* responses of normals as reported by Haque (1985) is 0.67. A comparison of means of our sample and that of other researchers reveals that mean *O* responses of our normals are greater as compared to the mean *O* in Haque's (1985) sample.

The data in Table 48 indicate that the frequency of *Sex* responses is 32 (9.06%) in psychotic depressives, 14 (3.76%) in schizophrenics and 22 (1.85%) in normals respectively. The mean values are 1.07, 0.47 and 0.73 for the three groups. The emerging patterns show that normals gave highest *Sex* responses, followed by schizophrenics and psychotic depressives. The pattern of *Sex* responses in normals suggests their concern about sexual problems, whereas, this pattern shows an increased avoidance and worries about sexual problems in psychotic depressives and schizophrenics. Haque (1985) has reported a mean value of *Sex* responses as 0.02 for his schizophrenic adults. It appears that the mean *Sex* responses of our sample of schizophrenics is greater than the mean *Sex* responses of Haque's (1985) sample. Mean values of *Sex* responses of sample of normals of Haque (1985) and Farooqi (1987) are 0.25, 0.68 respectively. A comparison between the mean values of our sample and of other researchers reveals that mean *Sex* responses of our normals are greater as compared to the those reported by Haque (1985) and Farooqi (1987).

The data in Table 48 indicate that the frequency of *X-ray* responses is 9 (2.54%) in psychotic depressives, 2 (0.53%) in schizophrenics and 3 (0.25%) in normals respectively. The mean values are 0.30, 0.06 and 0.10 respectively for these three groups. The emerging patterns show that psychotic depressives gave highest *X-ray* responses, schizophrenics the least and normals are falling in between the two groups. Farooqi (1987) has reported a mean *X-ray* responses of her normal sample as 0.17. It appears that mean *X-ray* responses of our normals are greater as compared to that as reported in the sample of Farooqi (1987).

The data in Table 48 indicate that the frequency of *A* responses is 108 (30.59%) in psychotic depressives, 113 (30.37%) in schizophrenics and 325 (27.35%) in normals.

The mean values are 3.60, 3.76 and 10.83 respectively for these three groups. The patterns show that normals gave highest *A* responses, as compared to schizophrenics and psychotic depressives. The pattern of *A* responses in normals suggests that their projection is facilitated by conforming and identifying with animals, whereas, the pattern of *A* responses in psychotic depressives indicate a greater difficulty in seeking stimulation from the environment. Haque (1985) has reported a mean value of *A* responses as 2.90 for his schizophrenic adults. It appears that the mean *A* responses of our sample of schizophrenics is greater than the sample of Haque (1985). Mean values of *A* responses of normals of the samples of Haque (1985), Farooqi (1987) and Jaleel (1990) are 5.23, 12.34, 8.13 and 1.81 respectively. A comparison between our sample and the sample of other researchers reveals that mean *A* responses of our normals are greater than the samples of Haque (1985) and Jaleel (1990), whereas, mean *A* of our normals is lower than the mean *A* of the sample of Farooqi (1987).

The results in Table 48 indicate that the frequency of *V* responses is 19 (5.38%) in psychotic depressives, 8 (2.15%) in schizophrenics and 44 (3.70%) in normals respectively. The emerging pattern shows that psychotic depressives gave highest *V* responses, schizophrenics the least and normals are falling in between the two groups. The patterns of *V* responses in normals suggest their effort to control anxiety, whereas, it indicates a greater difficulty in doing so in psychotic depressives as compared to schizophrenics. Viglione, Brager, and Haller (1988) have reported a frequency of 11 *V* responses in their sample of schizophrenics, whereas, Archer and Gorden (1985) have reported a frequency of 1 for *V* responses for their schizophrenic adults. It appears that the frequency of *V* responses of our sample of schizophrenics are lower than that reported by Archer and Gorden (1987), whereas, it is showing an increase as compared to the sample of Viglione, Brager, and Haller (1988). Mean values of *V* responses of the

sample of Farooqi (1987) and Jaleel (1990) are 1.02 and 0.21 respectively. A comparison between the mean of our sample and that of other researchers reveals that mean *V* responses of our normals are greater than those reported by Farooqi (1987) and Jaleel (1990).

The data in Table 48 indicate that the scores of Ego-centricity Index (*EC*) are 0.05 in psychotic depressives, 0.16 in schizophrenics and 0.08 in normals respectively. The emerging pattern reveals that schizophrenics are highest on *EC* responses, psychotic depressives the least and normals were falling between the two. Cut off point for *EC* has been reported as $< .30$ for psychotic depressives (Viglione, Brager & Haller, 1988). However, it appears that all the scores of our three groups are falling below that point. The emerging patterns of *EC* suggest relatively a greater self concern of normals, whereas, it is weaker and disjointed in psychotic depressives as compared to schizophrenics.

Table 48 indicates that the frequency of *C'* responses is 70 (19.83%) in psychotic depressives, 25 (6.72%) in schizophrenics and 37 (3.11%) in normals respectively. The patterns show that psychotic depressives gave highest number of *C'* responses, followed by normals and schizophrenics. The patterns of *C'* responses in normals suggest use of shading in determining their responses, whereas, it reflect a greater degree of depression in psychotic depressives. Haque (1985) has reported a mean value of 0.82 *C'* responses for his schizophrenic adults. It appears that the mean value of *C'* responses of our sample is greater than that reported by Haque (1985). Mean values of *C'* responses of the normals of the sample of Haque (1985) Farooqi (1987) and Jaleel (1990) are 0.03 and 1.40 and 0.65 respectively. The emerging patterns show that mean *C'* responses of our normals are greater than those reported by Haque (1985) and Jaleel (1990), whereas,

these are lower than that reported by Farooqi (1987).

The data in Table 48 indicate that the frequency of *MOR Sum* responses is 19 (5.40%) in psychotic depressives, 5 (1.34%) in schizophrenics and these are missing in the normals. The mean values are 0.63 and 0.16 for these groups respectively. The emerging pattern shows that psychotic depressives gave highest number of *MOR Sum* responses as compared to schizophrenics. The non-prevalence of *MOR Sum* responses in normals suggests absence of depression in the group, whereas, *MOR Sum* responses in psychotic depressives indicate the presence of greater degree of depression as compared to schizophrenics. The frequency of *MOR Sum* in our sample of schizophrenics is lower than the frequency (9) of *MOR Sum* as reported by Archer and Gorden (1987) for their sample of schizophrenics. Similarly, the frequency of *MOR Sum* is 20 as reported by Archer and Gorden (1987), whereas, Viglione, Brager and Haller (1988) have reported *MOR Sum* frequency of 1 for their psychotic depressives sample. It appears that frequency of *MOR Sum* responses of our psychotic depressives is lower than the *MOR Sum* frequency of Archer and Gorden (1987), whereas, frequency of our *MOR Sum* responses is greater than that reported by Viglione, Brager, and Haller (1988).

Table 48 indicates that the proportion of *M:SumC (EB)* responses is 10:26 in psychotic depressives, 17:31 in schizophrenics and 91:100 in the normals. The relative ratios are 1:3 and 1.2 and 1:1 for the three groups respectively. The emerging patterns show that normals are showing a balanced *EB* as compared to psychotic depressives and schizophrenics.

The data in Table 48 indicate that the frequency of *FC* responses is 19 (5.40%) in psychotic depressives, 3 (0.80%) in schizophrenics and 39 (3.28%) for the normals. The

emerging patterns show that normals gave highest number of *FC* responses, schizophrenics the least and psychotic depressives are falling in between the two groups. The patterns of *FC* responses in normals suggest their controlled responsiveness to emotional stimuli, whereas, it indicates a poor adjustment in schizophrenics as compared to psychotic depressives. The mean value of *FC* responses of our schizophrenic subjects is lower than the mean value of *FC* responses of 0.32 as reported by Viglione, Brager, and Haller (1988) for their sample of schizophrenics. Similarly, the mean value of *FC* responses of the normal samples of Haque (1985), Farooqi (1987) and Jaleel (1990) are 0.27, 1.40 and 0.79 respectively. It appears that *FC* responses of our normals are lower than the mean *FC* responses of Haque (1985) and Jaleel (1990), whereas, these are greater than that reported by Farooqi (1987).

The data in Table 48 show that the frequency of *R* average responses is 353 in psychotic depressives, 372 in schizophrenics and 1188 for the normals. The mean values are 11.76 and 12.40 and 40.00 for the three groups respectively. The emerging patterns show that normals gave highest number of *R* average responses, followed by schizophrenics and psychotic depressives. A high *R* average in normals suggests their productivity and responsiveness to environment, whereas, it indicates a poor responsiveness of psychotic depressives and schizophrenics to environmental stimulation. Mean values of our schizophrenics are greater than the mean *R* of Haque's (1985) schizophrenic sample which is 11.46. Similarly, mean values of *R* average responses as reported by Haque (1985), Farooqi (1987), and Jaleel (1990) are 12.57, 41.78 and 22.07 respectively for their normal samples. Mean *R* average responses of our normals are found to be greater than the mean *R* average responses of the samples of Haque (1985) and Jaleel (1990), whereas, these are greater as compared to the mean *R* of Farooqi (1987).

Table 48 show that the frequencies of *Afr* responses are [104/(1-249)] (0.41) in psychotic depressives, [113/(1-259)] (0.43) in schizophrenics and [406/(1-782)] (0.52) for the normals. The patterns of *Afr* indicate that normals scored higher on *Afr* scores, as compared to schizophrenics and psychotic depressives. *Afr* scores indicate general responsiveness to emotional stimuli and the cut off point of *Afr* scores in psychotic depressives has been defined as $< .55$ (Viglione, Brager, and Haller, 1988). The emerging pattern of *Afr* shows that both the clinical groups are meeting this criterion, whereas, the *Afr* scores of normals are also below this cut off point, however, these are closer to the cut off point. The pattern of *Afr* in normals suggests the presence of general responsiveness to emotional stimuli, whereas, it indicates a weaker responsiveness of psychotic depressives to outer stimulation as compared to schizophrenics.

Table 48 shows that the frequencies of *W-* responses are 79 (22.37%) in psychotic depressives, 72 (19.35%) in schizophrenics and 30 (2.52%) for the normals. Their mean values are 2.63, 2.40 and 1.00 respectively. The emerging pattern indicates that psychotic depressives scored higher on *W-* responses, followed by schizophrenics and normals. The pattern of *W-* in normals suggests the presence of weak organizational ability, whereas, it indicates relatively a greater degree of poorer organization in psychotic depressives as compared to schizophrenics. Archer and Gorden (1987) have reported mean value of *W-* of 0.34 for their schizophrenic sample. The emerging pattern of *W-* in our schizophrenics shows an increase as compared to the *W-* of Archer and Gorden (1987).

Results in Table 48 show that the frequencies of (*M-*) responses are 9 (2.54%) in psychotic depressives, 17 (4.56%) in schizophrenics and 13 (1.09%) for the normals. Their mean values are 0.30, 0.56 and 0.43 respectively. The emerging pattern indicates

that schizophrenics gave highest frequency of (*M-*) responses, whereas, psychotic depressives are lowest on these and normals are falling between the two. Generally, weak (*M-*) are taken as an important indicator of schizophrenia or major depression (Archer & Gorden, 1987). Prevalence of a high (*M-*) in our schizophrenics reveals their weak and disjointed interpersonal relationship, whereas, presence of (*M-*) responses in psychotic depressives is related to their withdrawn personality type. Archer and Gorden (1987) have reported mean value of (*M-*) of 1.00 for their schizophrenic sample. The emerging pattern of (*M-*) responses in our schizophrenics shows a decrease as compared to the (*M-*) responses of Archer and Gorden (1987). Table 48 shows that the frequency of (*M-*)...*Hd* responses is 6 (1.69%) in psychotic depressives, 8 (2.15%) in schizophrenics and 2 (0.16%) in normals. Their mean values are 0.20, 0.26 and 0.06 respectively. The emerging pattern reveals that highest number of (*M-*)...*Hd* responses are in schizophrenics, followed by psychotic depressives and normals. The category of (*M-*)...*Hd* in schizophrenic group is found to have a differential diagnostic value as compared to psychotic depressives and normals. The pattern of (*M-*)...*Hd* in schizophrenics shows weaker thought and perceptual process and impaired interpersonal relationship as compared to psychotic depressives.

Table 48 shows that the frequency of weak *FLR* responses is 227 (64.30%) in psychotic depressives, 301 (80.91%) in schizophrenics and 35 (2.94%) in the normals. Their mean values are 7.56, 10.03 and 1.16 respectively. The emerging pattern indicates that schizophrenics gave highest frequency of weak *FLR* responses, whereas, normals are lowest on these and psychotic depressives are falling in between the two groups. The pattern of weak *FLR* reveals that a greater distortion of perception in schizophrenics as compared to psychotic depressives, whereas, in the normals presence of weak *FLR* in this amount is within normal expectancy. Mahmood (1987) has found weak *FLR* of 86.66%

for his schizophrenic sample. It appears that weak *FLR* of our schizophrenic group is slightly lower than that reported in Mahmood's (1987) sample.

Results in Table 48 show that the frequencies of *CF+C* responses are 13 (3.68%) in psychotic depressives, 18 (4.83%) in schizophrenics and 48 (4.04%) for the normals. Their mean values are 0.43, 0.60 and 1.60 respectively. The emerging pattern indicates that normals gave highest frequency of *CF+F* responses, followed by schizophrenics and psychotic depressives. Mahmood (1987) has reported 63.66% of *CF+C* responses for his schizophrenic sample. The pattern of *CF+C* responses in our schizophrenics shows a decrease as compared to the *CF+C* responses of that reported by Mahmood (1987).

Table 48 also shows that the frequency of Pure *C (C)* responses is 6 (1.69%) in psychotic depressives, 13 (3.49%) in schizophrenics and 43 (3.61%) in normals. Their mean values are 0.20, 0.43 and 1.43 respectively. It appears that normals have produced higher number of Pure *C (C)* responses, as compared to schizophrenics and psychotic depressives. The patterns of *Pure C (C)* responses reveal the presence of uncontrolled emotionality in schizophrenics and psychotic depressives, whereas, in normals the responses pattern of *Pure C (C)* responses gives the indication of aggression.

Results in Table 48 show that the frequencies of *Cont* responses is 8 (2.26%) in psychotic depressives, 16 (4.30%) in schizophrenics and 3 (0.25%) in the normals. Their mean values are 0.26, 0.53 and 0.10 respectively. The emerging pattern indicates that schizophrenics gave highest frequency of *Cont* responses, as compared to psychotic depressives and normals. The patterns of *Cont* responses in schizophrenics reveal a greater degree of uncontrolled emotionality as compared to psychotic depressives. Viglione, Brager, and Haller (1988) have reported mean value of 0.13 responses for their

schizophrenic sample. The emerging pattern of *Cont* responses in our schizophrenic group shows a decrease as compared to the *Cont* responses of the sample of those reported by Viglione, Brager, and Haller (1988).

Table 48 shows that the frequency of *Conf* responses is 3 (0.84%) in psychotic depressives, 6 (1.61%) in schizophrenics and 2 (0.16%) for the normals. Their mean values are 0.10, 0.20 and 0.06 respectively. The emerging pattern indicates that schizophrenics gave highest frequency of *Conf* responses, whereas, normals the least and psychotic depressives are falling between the two groups. The pattern of *Conf* responses in schizophrenics is showing poor perceptual accuracy as compared to psychotic depressives, whereas, in the normals these responses are related to distortion of perception.

CHAPTER IV

RELIABILITY AND VALIDITY

Inter-Scorer Reliability

The consistency in scoring of Rorschach responses was determined through inter-scorer reliability. Following analyses were conducted to determine inter-scorer reliability:

i) percentage of agreement between two judges on major scoring categories of Rorschach was computed.

ii) Kandell's *tau B* was computed to find out the extent of relationship between the scoring of the judges on major scoring categories of Rorschach.

The scoring of Rorschach responses was done with the help of Klopfer and Davidson's (1962) scoring system in addition to Beck et al. (1961) table of form level and Exner's (1978) additional content categories. 30 protocols (written records) of normal, psychotic depressive and schizophrenic females along with inquiries were scored by the researcher and an American Rorschach expert. The records were scored independently by both the judges.

One of the judges commented on the various aspects of the written records. These comments at times indicated difference of opinion on the quantity of the responses. One judge found it a little bit difficult to score some responses i.e., whether to treat two responses as separate, additional or as repetition of the same response. He felt that the

inquiry was not sufficient to clarify these issues. He made special references to records No. 13, 16 and 19 having very large number of responses. He found it difficult to score these records, as too many responses were given about the same location and the same determinant.

These comments were very useful. However, the problem of quantity of responses remained unresolved. The researcher felt that the justification of treating responses as separate, was, firstly, because of the subjects mode of giving them as separate responses. Secondly, these responses showed creative productivity and imagination of the subjects, as all of these protocols belonged to the normal group. Many subjects did not seem to be satisfied with one or two responses. Therefore, they gave different responses on the same location, which was further clarified in inquiry phase.

Table 49 presents the percentages of agreement between the two judges on major scoring categories among the three groups of psychotic depressives, schizophrenics and normals.

Table 49

Inter-Scorer Agreement on Major Scoring Categories of Rorschach for Psychotic Depressive, Schizophrenic and Normal Females

Scoring Categories	Psychotic Depressives			Schizophrenics			Normals		
	ScorerI	ScorerII	Percentage of Agreement	ScorerI	ScorerII	Percentage of Agreement	ScorerI	ScorerII	Percentage of Agreement
Location	353	340	96	372	332	89	1188	1133	95
Determinant	353	338	95	372	329	88	1188	1065	89
Contents	353	342	96	372	340	91	1188	1039	87
Populars	67	55	82	71	60	84	185	170	92
Originals	286	280	97	301	275	91	1003	910	90
FLR*	67	50	74	125	118	94	835	825	98
FLR	286	278	97	247	230	93	353	288	81
Total:	1765	1683	93%	1860	1684	90%	5940	5430	91%

Table 49 shows that percentages of agreement between the judges on scoring of responses is 93% for psychotic depressives, 90% for schizophrenics and 91% for the normals respectively. This indicates a high degree of correspondence between the rating of the two judges on Rorschach responses. The data in Table 49 also indicate that percentage of agreement between the judges ranges from 74-97% for psychotic depressives, 84-94% for schizophrenics and 81-98% for normals on different scoring categories of Rorschach respectively.

Kandell's *tau B* was computed between the scoring of two judges on all the major categories of Rorschach for psychotic depressives, schizophrenics and normals. The values of Kandell's *tau B* are 0.87 ($p < .01$) for psychotic depressives, 0.93 ($p < .005$) for schizophrenics and 0.93 ($p < .005$) for the normals. This shows a highly significant inter-scoring agreement for the scoring of the Rorschach protocols of psychotic depressives, schizophrenics and normals.

Split- half Reliability of Rorschach

Split-half reliability was computed to find out the reliability of Rorschach as a measurement instrument. All the 90 records of psychotic depressive, schizophrenic and normal females (30 each) were selected for this purpose. For each group Rorschach scores on 69 major scoring categories were divided into two parts respectively:

- i) set A contained scores of the answers to the odd numbered cards of Rorschach including cards I, III, V, VII, and IX.
- ii) set B contained scores of the responses on even numbered cards of Rorschach

including cards II, IV, VI, VIII, and X.

These two sets of scores were correlated with each other with the help of Pearson Product Moment Correlation. As the correlation coefficient obtained was the split-half reliability of the test, Spearman Brown Correction was applied to obtain the reliability of the total test.

Table 50 gives the internal consistency reliability estimates of psychotic depressives, schizophrenics and normals.

Table 50

Split-half Reliability of Rorschach of Psychotic Depressive, Schizophrenic and Normal Females on Rorschach

Categories	Split-half Reliability	Spearman Brown Correction	<i>p</i>
Psychotic Depressives (<i>N</i> = 30)	0.69	0.81	.001
Schizophrenics (<i>N</i> = 30)	0.67	0.80	.001
Normals(<i>N</i> = 30)	0.75	0.85	.001

Results in Table 50 indicate that split-half reliability of half of the test for psychotic depressives is 0.69. After applying Spearman-Brown Correction the reliability for the total test is 0.81, $p < .001$, which is highly significant.

Table 50 indicate that split-half reliability of half of the test for schizophrenics is 0.67. After applying Spearman-Brown correction the reliability for the total test is 0.80, $p < .001$, which is highly significant.

Results in Table 50 indicate that split-half reliability of half of the test for normals is 0.75. After applying Spearman-Brown correction the reliability for the total test is 0.85, $p < .001$, which is highly significant.

Discriminant Validity of the Rorschach

The discriminant validity of Rorschach was computed to know whether the test can be used for classification and diagnostic purposes. For this purpose $k \times l$ *Chi-square* tests were computed on distinguishing and critical categories of Rorschach. The responses of three groups on the set of categories belonging to the distinguishing categories were analyzed. The responses of the three groups on critical categories of Rorschach were converted into percentages prior to *Chi-square* analysis. This was done to bring uniformity in data which exhibits great diversity on various categories ranging from simple frequencies to ratios.

Table 51 presents $k \times l$ *Chi-square* analysis on Rorschach distinguishing categories including whole (*W*), large usual detail (*D*), small usual detail (*d*), rare detail (*Dd+S*), form (*F*), form plus (*F+*), sexual (*Sex*), x-ray (*X-ray*), animal (*A*), responses plus (*R+*), sum of colour (*SumC*) and original responses for psychotic depressives, schizophrenics and normals.

Table 51

Chi-square Analysis on Rorschach Distinguishing Categories for Classified Sample of Psychotic Depressive, Schizophrenic and Normal Females.

Categories	W	D	d	Dd*S	FSum	F*	Sex
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Psychotic Depressives (N= 30)	117 (85.9)*	156 (162.5)	15 (22.6)	55 (36.0)	181 (189.1)	79 (132.0)	32 (11.0)
Schizophrenics (N= 30)	126 (91.3)	190 (172.8)	19 (24.0)	25 (38.3)	225 (201.1)	94 (140.3)	14 (11.7)
Normals (N= 30)	286 (351.8)	655 (665.7)	105 (92.4)	142 (147.6)	759 (774.8)	640 (541.7)	22 (45.2)
<i>Coloumn Percentage</i>	7.2%	13.7%	1.9%	3.0%	15.9%	11.1%	0.9%

Continued Table 51...

X-ray	A	R*	SumC	O	Row Percentage
(8)	(9)	(10)	(11)	(12)	
9 (2.3)	108 (88.6)	126 (176.3)	26 (25.5)	286 (258.1)	16.2%
2 (2.4)	113 (94.2)	125 (187.4)	31 (27.1)	301 (274.4)	17.3%
3 (9.3)	325 (363.1)	835 (722.3)	100 (104.4)	1003 (1057.5)	66.5%
0.2%	7.4%	14.8%	2.1%	21.7%	100.0%

Chi-Square= 267.6, df= 22 , p<.001 *(Expected Frequencies are given in parenthesis)

The results show a highly significant difference between psychotic depressives, schizophrenics and normals on distinguishing categories of Rorschach, *Chi-square* = 267.6 , *df*= 22, *p* < .001. The data in Table 51 indicate that two cells in *X-ray* category are with expected frequency less than 5. However, according to the requirement of Chi-square if the degrees of freedom are less than 5, then 20% of expected frequencies should be less than 5 (Hays, 1963). The data in Table 51 indicate that total degrees of freedom are 22 (more than 5) and only 5.6% of the expected frequencies are less than 5, so this requirement is fulfilled in this case.

Table 52 presents *k x l Chi-square* analysis on Rorschach critical categories including whole minus responses (*W-*), weak form level rating (*FLR*), poor human movement responses (*M-*), poor human movement responses associated with human detail (*M-*)...*Hd*, colour form and colour responses (*CF+C*), Pure colour responses (*C*), contamination responses (*Cont*), confabulatory responses (*Conf*), vista responses (*V*), form colour responses (*FC*), achromatic responses (*C'*), morbid content (*MOR*), experience balance (*EB*), total number of response plus (*R+*), form colour (*FC*), and affective ratio responses (*Afr*) for psychotic depressive, schizophrenic and normal females.

Table 52

Chi-square Analysis on Rorschach Critical Categories for Classified Sample of Psychotic Depressive, Schizophrenic and Normal Females.

Categories	W-	Weak FLR	(M-)	(M-)...Hd	CF+C	Pure C(C)	Conf	Cont
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Psychotic Depressives (N= 30)	44 (30.7)*	40 (31.2)	23 (30.4)	37 (31.2)	16 (30.7)	10 (30.7)	30 (30.7)	27 (30.4)
Schizophrenics (N= 30)	40 (32.1)	53 (33.2)	43 (31.7)	50 (33.2)	23 (32.1)	21 (32.1)	59 (32.1)	54 (31.7)
Normals (N= 30)	16 (37.2)	6 (34.6)	33 (36.8)	12 (34.6)	61 (37.2)	69 (37.2)	11 (37.2)	18 (36.8)
<i>Coloumn Percentage</i>	6.3%	6.2%	6.2%	6.2%	6.3%	6.3%	6.3%	6.2%

Continued Table 52...

V	EC	C'	MOR Sum	EB	R+	FC	Afr	Row Percentage
(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	
27 (30.7)	17 (30.4)	53 (30.7)	79 (30.7)	21 (30.7)	18 (30.4)	31 (30.7)	30 (31.6)	30.7%
11 (32.1)	55 (31.7)	19 (32.1)	21 (32.1)	29 (32.1)	19 (31.7)	5 (32.1)	32 (35.5)	32.1%
62 (37.2)	27 (36.8)	28 (37.2)	0 (37.2)	50 (37.2)	62 (36.8)	64 (37.2)	38 (34.9)	37.2%
6.3%	6.2%	6.3%	6.3%	6.3%	6.3%	6.3%	6.3%	100.0%

Chi-Square = 509.6, df = 30, p < .001

**(Expected Frequencies are given in parenthesis)*

The results in Table 52 show a highly significant difference between psychotic depressives, schizophrenics and normals on critical categories of Rorschach, *Chi-square* = 509.6, *df* = 30, *p* < .001.

CHAPTER V

Study 2

METHOD

Sample

The sample of study 2 comprised of 60 inpatient unclassified psychotic females. Among these, 30 inpatient psychotic females were taken from the psychiatry ward, General Hospital Rawalpindi (R1) and other 30 inpatient psychotic females were randomly selected from the psychiatry ward, Mental Hospital, Peshawar (R2). These two samples i.e., R1 and R2 consisted of randomly selected inpatient psychotic females whose diagnosis was not obtained by the psychiatrist or any other source. In addition, the criteria used for the selection of subjects were as follows:

1. who did not have any history of organic pathology;
2. who were communicable;
3. whose shock-treatment was terminated at least one week before the testing;
4. who were between the age range of 25-45 years.

Instrument

Rorschach test was used as major instrument. In addition, a bio-data sheet was given to the subjects to record their age, education and socio-economic status.

Procedure

Rorschach was administered to the subjects individually following the standard testing situation. An average of three subjects were tested daily in their hospitals. The development of rapport was of prime importance before the actual testing, in order to fulfil the important requirement of Rorschach. Following the standard procedures three factors were considered important in preparing subject for the test; (a) nature of the test atmosphere; (b) the seating arrangement of the subject and the examiner; and (c) the test equipment and the initial instructions to the subjects.

Subjects were given instructions as suggested by Klopfer and Davidson (1962) in their local language as mentioned in study 1 (see p.75).

The procedure for test administration was adopted from Klopfer and Davidson (1962). Subjects were presented cards in consecutive order in upright position. All the verbatim were recorded in Urdu language, using researcher's own short hand script. Moreover, the reaction time, total time per card, and total time to complete the performance proper were also recorded. The inquiry was also conducted regarding the further information of subjects' responses based on Location, Determinant and Content categories of the inkblot. The queries made by the subjects and the responses given by the researcher were identical as have already been mentioned in study 1 (see p.75).

Scoring

Scoring procedure for Location, Determinant was mainly derived from Klopfer and Davidson (1962). However, the deviation was made in terms of Form Level Rating, F

responses were scored as F+ or F- which were adapted from Beck et al. (1961). The content categories were in part taken from Rorschach (1922/1975) and as described by Beck et al. (1961), and Klopfer and Davidson (1962). Scores of Egocentricity Index, Morbid content and deviant verbalizations were taken from Exner and Weiner (1982).

Post- classification of Psychotic Depressive, Schizophrenics and other Inpatient Psychotic Females

On the basis of pattern of responses of psychotic depressives and schizophrenics to Rorschach in study 1 the protocols of sixty inpatient psychotic females were matched with the response patterns of psychotic depressives and schizophrenics in the study 1. On the basis of this matching the random sample of psychotics were classified into three major categories: 1) psychotic depressives; 2) schizophrenics; and 3) other psychotic females.

As a result of this classification 20 patients were identified as psychotic depressives. Their patterns of responses on distinguishing categories showed more *D* responses as compared to *W*'s. The group gave more *d* and *Dd+S* responses. Similarly fewer *F+* greater *Sex*, *X-ray* and *A* responses were also found in their protocols. On critical categories the group produced greater *V* responses as compared to lower *EC* index. Similarly, the group gave high *C'* responses, poor *FC* responses and low *R* responses. Ratio of *M:SumC* also showed greater responses on *SumC* responses as compared to *M* responses. *Afr* ratio was also found to be quite low in the group.

Similarly, patients who were classified as schizophrenics included 20 subjects. Their pattern of responses on distinguishing categories indicated that they gave more *D* responses as compared to *W*'s. The group has also produced greater responses in *d* and

Dd+S categories as compared to low *SumC* responses. Similarly on critical categories of Rorschach the group gave more *W-* and weak *FLR* responses. The patterns of (*M-*), (*M-*)...*Hd*, *Conf* and *Cont* also gives the paranoid indication in the group.

The sample of other psychotic females included 20 subjects. This category included those subjects who did not fall in both the distinguishing and critical classification categories of psychotic depressives and schizophrenics.

Analysis

Analyses were performed to find out whether the groups of psychotic depressives, schizophrenics and other psychotics classified on the basis of determined pattern of responses for psychotic depressives and schizophrenics in study 1, significantly differ from each other or not. This was done to ascertain whether Rorschach is a valid test to be used as an instrument for the differential diagnosis of psychotics.

For this purpose $k \times 1$ *Chi-Square* analysis were performed on the responses of psychotic depressives, schizophrenics and other psychotics on the distinguishing and critical categories of Rorschach.

Table 53 presents $k \times 1$ *Chi-square* analysis on Rorschach distinguishing categories including whole (*W*), large usual detail (*D*), small usual detail (*d*), rare detail (*Dd+S*), form sum (*F Sum*), form plus (*F+*), sexual (*Sex*), x-ray (*X-ray*), animal (*A*), total number of responses plus (*R+*), sum of colour (*SumC*) and original (*O*) responses, for the samples of psychotic depressive, schizophrenic and other psychotic females.

Table 53

Chi-square Analysis on Rorschach Distinguishing Categories for Post-classified Sample of Psychotic Depressives, Schizophrenics and Other Psychotic Females.

Categories	<i>W</i>	<i>D</i>	<i>d</i>	<i>Dd+S</i>	<i>F Sum</i>	<i>F+</i>	<i>Sex</i>
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Psychotic Depressives (<i>N</i> = 20)	90 (87.3)*	144 (148.1)	12 (10.7)	42 (28.8)	70 (84.7)	70 (62.4)	22 (15.8)
Schizophrenics (<i>N</i> = 20)	110 (118.4)	180 (208.8)	10 (14.5)	28 (39.0)	117 (114.8)	80 (84.6)	10 (21.5)
Other Psychotic Females (<i>N</i> = 20)	70 (64.3)	134 (109.1)	11 (7.9)	19 (21.2)	75 (62.4)	43 (46.0)	17 (11.7)
<i>Coloumn Percentage</i>	11.2%	19.0%	1.4%	3.7%	10.9%	8.0%	2.0%

Continued Table 53...

<i>X-ray</i>	<i>A</i>	<i>R+</i>	<i>SumC</i>	<i>O</i>	<i>Row Percentage</i>
(8)	(9)	(10)	(11)	(12)	
6 (3.6)	78 (70.8)	108 (77.6)	20 (22.6)	117 (166.5)	32.3%
4 (4.8)	89 (96.0)	120 (105.2)	28 (30.7)	280 (225.8)	43.8%
1 (2.6)	52 (52.2)	12 (57.2)	22 (16.7)	118 (122.7)	23.8%
0.5%	9.1%	10.0%	2.9%	21.4%	100.0%

Chi-Square= 122.7, *df*= 22 , *p*<.001

**(Expected Frequencies are in parenthesis)*

The results in Table 53 indicate a highly significant difference between psychotic depressives, schizophrenics and other psychotics on the distinguishing categories of Rorschach, $Chi-square = 122.7, df = 22, p < .001$.

The three groups of psychotic depressive, schizophrenic and other psychotic females are significantly differing from each other on these categories. One category namely *X-ray* responses is giving cell values less than 5. Table 53 indicates that three cells in *X-ray* category are with expected frequency less than 5 (8.3%). However, according to the requirement of *Chi-square* if the degrees of freedom are less than 5 then 20% of expected frequency should be less than 5 (Hays, 1963). The data of Table 53 indicates that 8.3% of the expected frequencies with 22 degrees of freedom are less than 5, so the requirement of *Chi-square* in our analysis is not valid.

Table 54 presents $k \times l$ *Chi-square* analysis on Rorschach critical categories including whole minus responses (*W-*), weak form level rating (*FLR*), poor human movement responses (*M-*), poor human movement responses associated with human detail (*M-...Hd*), colour form and colour responses (*CF+C*), Pure colour responses (*C*), contamination responses (*Cont*), confabulatory responses (*Conf*), vista responses (*V*), form colour responses (*FC*), achromatic responses (*C'*), morbid content responses (*MOR*), experience balance (*EB*), total number of response plus (*R+*), form colour responses (*FC*), and affective ratio responses (*Afr*) of psychotic depressive, schizophrenic and other psychotic females. Since, the scores of critical categories have been derived by using different formulas so the raw frequencies of scores for each categories have been converted into percentages.

Table 54

Chi-square Analysis on Rorschach Critical Categories for Post-classified Sample of Psychotic Depressive, Schizophrenic and Other Psychotic Females

Categories	W	Weak FLR	(M-)	(M-)...Hd	CF+C	Pure C(C)	Conf	Cont
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Psychotic Depressives (N= 20)	31 (31.0)*	27 (31.3)	25 (31.3)	30 (31.3)	36 (31.3)	17 (31.3)	22 (31.0)	20 (31.3)
Schizophrenics (N= 20)	43 (36.8)	32 (37.2)	44 (37.2)	60 (37.2)	50 (37.2)	48 (37.2)	55 (36.8)	60 (37.2)
Other Psychotic Females (N= 20)	25 (31.2)	41 (31.5)	31 (31.5)	10 (31.5)	14 (31.5)	35 (31.5)	22 (31.2)	20 (31.5)
<i>Coloumn Percentage</i>	6.2%	6.3%	6.3%	6.3%	6.3%	6.3%	6.2%	6.3%

Continued Table 54...

V	EC	C'	MOR Sum	EB	R+	FC	Afr	Row Percentage
(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	
32 (31.0)	8 (31.3)	55 (31.3)	69 (31.0)	20 (31.0)	31 (31.3)	32 (31.0)	44 (31.0)	31.3%
20 (36.8)	50 (37.2)	16 (37.2)	13 (36.8)	28 (36.8)	37 (37.2)	3 (36.8)	33 (36.8)	37.2%
47 (31.2)	42 (31.5)	29 (31.5)	17 (31.2)	51 (31.2)	32 (31.5)	64 (31.2)	22 (31.2)	31.5%
6.2%	6.3%	6.3%	6.2%	6.2%	6.3%	6.2%	6.2%	100.0%

Chi-Square= 331.6, $df = 30$, $p < .001$

**(Expected Frequencies are in parentehesis)*

The results in Table 54 indicate a highly significant difference between psychotic depressives, schizophrenics and other psychotics on the critical categories of Rorschach, *Chi-square* = 331.6, *df*= 30, *p* < .001.

CHAPTER VI

DISCUSSION AND CONCLUSION

The study was undertaken to establish the distinctive pattern of responses of psychotic depressive, schizophrenic and normal females on Rorschach. The study has also determined the inter-scorer and split -half reliabilities and the discriminant validity of Rorschach. The study was divided into two parts: study 1 was aimed at establishing patterns of responses of psychotic depressive, schizophrenic and normal females on Rorschach, whereas, in study 2 these response patterns were employed to categorize unclassified inpatient psychotics into psychotic depressive, schizophrenic and other psychotic females.

Patterns of responses of psychotic depressive, schizophrenic and normal females in study 1 on Rorschach were determined through: 1) patterns of three groups in the form of summary table (Table 1); 2) patterns of three groups on 69 scoring categories of Rorschach in the form of frequencies, percentages, and ratios, (Table 2) ; 3) patterns of three groups on 69 scoring categories through one way analysis of variance (Table 3-48); 4) patterns of psychotic depressives on distinguishing and critical categories (Table 49-50); 5) patterns of schizophrenic on distinguishing and critical categories (Table 51-52); 6) patterns of normals on distinguishing and critical categories (Table 53); and 7) pattern summary of classified groups of psychotic depressives, schizophrenics and normals on distinguishing and critical categories (Table 54).

Summary Table 1 presents distinctive patterns of three groups. The normal group

produced highest number of responses as compared to the psychotic depressives who were on the lowest in productivity and schizophrenics fell in between the two groups. In terms of inner resources and impulse life an initial examination of the psychograms (Appendix D) of the three groups show that majority of the responses of psychotic depressive are reflecting inhibition and emotional constriction largely influenced by inner determinants, movement, and use of shading in the form of vista responses, as compared to them, the schizophrenic group gave responses on both sides of the psychogram, yet, these too are piling up on the left side of the psychogram. However, the psychogram of normals shows a good distribution of scores of responses on both sides of psychogram showing groups' intelligence and ability to react freely to the outer environment.

Patterns of responses of three groups on 69 scoring categories of Rorschach are computed in the form of frequencies, percentages and means. Patterns of responses on these scoring categories show that the three groups differ significantly on all the location, determinant, content, *P-O*, and *FLR* scores, which are also similar in many respects to the Western norms. Location scores reveal that the normal group gave highest number of scores on all the 15 sub-categories of location area followed by schizophrenics and psychotic depressives. These should also be linked with the total number of responses (*R*) of each group which has affected their scores in other categories as well. Location scores in general reveal that our normal group has a well developed intellectual manner of approach, whereas, the other two clinical groups are poor in this respect. In total, the responses of normals are distributed on 14, psychotic depressives on 15, and schizophrenics on 13 location categories. The categories of *W1* and *dd* responses are absent in the schizophrenics. Emotional aspect of the persons are revealed through the determinant scores. Our study has shown that normal female group is emotionally well adjusted, stable and mature when compared on the determinant scores with the other two

clinical groups. The normal group has given responses to all the sub-categories of determinant scores except *de* response category, which may also be taken as an indicator of suppression of the contents of impulses of immediate gratification. The psychotic depressive group gave no responses in inanimate movement (*m*) and texture (*c*) category, whereas, the presence of *m*, *Fm* responses in the schizophrenics also indicate the paranoid thinking. The normal group produced a balance of determinant scores, whereas, the scores of schizophrenics are piling up in the centre, and the psychotic depressives gave more of those determinant scores which are related to their inner control, imagination and anxieties.

Among 24 determinant categories the responses of psychotic depressives are distributed on 20, schizophrenics on 24 and normals on 23 categories respectively. The determinant categories including *Fm*, *mF* and *k* did not discriminate significantly between the three groups.

Among 30 content categories 28 were used by the psychotic depressives, 27 by schizophrenics and 26 by normals respectively. The contents of *Msk*, is not found in the clinical groups, whereas, the content category (2) or pair response is absent in schizophrenic and normal group. Content category *MOR* is absent in normals, whereas, *MOR* or morbid contents relating to human depression (*H.dep*) are absent in schizophrenics.

The patterns of three groups on 69 scoring categories of Rorschach were also computed with the help of one way analysis of variances. Among location scores the response categories including *W*, *D*, *d*, *di*, *dr*, and *S* are significantly discriminating the psychotic depressives, schizophrenics and normals. However, the response categories

including *DW*, *de*, did not differentiate between the three groups.

Among determinant scores the categories including *F+*, *M*, *FM*, *C*, *FC*, *CF*, *F/C*, *C/F*, *KF*, *FC'/C'F*, *kSum* were found significantly discriminating the three groups of psychotic depressives, schizophrenics and the normals. However, the categories including *Fc/cF*, *FK*, *K*, *Fk/kF*, *C'* were not found significantly discriminating between the three groups. Among content scores the categories of *H*, *Hd*, *A*, *Ad*, *At*, *Obj*, *Col*, *N*, *Pl*, *r*, *Bl* significantly discriminated the three groups. However, the content categories including *A At*, *Geo*, *Sex*, *Eru*, *rF*, *X-ray*, *Fi*, *Arch*, and *(H)* did not significantly differentiate between the three groups.

Not only these groups showed distinctive patterns on all the 69 scoring categories, but there were also differences on the distinguishing and critical categories regarding their responses.

Results of the pattern summary of psychotic depressives reveal that the psychotic depressive group gave high number of *vista* responses. It shows that the depressive group is failing to concentrate on themselves as compared to the normals and schizophrenics. Responsiveness to non-colour areas of blot (*C'*) is another strong indicator of depression. Our psychotic depressive group gave high frequency of *C'* responses. Morbid contents (*MOR*) related to death, decay and destruction are another indicator of depression. Frequency of *MOR* in psychotic depressive is quite high. In our psychotic depressive group morbid contents are generally revealing the subjective mood of our sample. The psychotic depressive group also gave disturbed experience balance. Affective ratio (*Afr*) in our psychotic depressive group is quite low as compared to normal and schizophrenic group. The psychotic depressive group is markedly differing on these categories as well.

Results of the pattern summary of schizophrenic indicates that minus human movement response (*M-*) are found dominating in our schizophrenic group which are taken as an important indicator of schizophrenia. The (*M-*) are reflecting our group's weak and disjointed relationship with others, which are the main feature of schizophrenics. Minus human movements related with human details (*M-*)...*Hd* is another important indicator of presence of delusional potential which is evident in our sample of schizophrenics as well. Our schizophrenic group has produced greater number of (*M-*)...*Hd* responses as compared to other groups. However, the schizophrenic group is not discriminating from psychotic depressives and normals on weak *FLR*. However, it should be seen in relation with *W-* responses, which are dominant in our schizophrenic group. It is assumed that the schizophrenic group has uncontrolled emotionality which is revealed through the perception of *CF+C* responses, but it is not prominent in our schizophrenic group. The Pure *C* (*C*) category is also not differentiating the schizophrenic group from other two groups. Contamination (*Cont*) and Confabulatory (*Conf*) responses are typical characteristics of our schizophrenic group which are far greater than the psychotic depressives and the normals.

The results of *k x l Chi-square* analyses show that three groups significantly differ on both distinguishing and critical categories of Rorschach. A significantly high *Chi-square* scores of distinguishing and critical categories not only indicates the validity of the scoring but also establishes the discriminant validity of Rorschach for differential diagnosis. Again the patterns of three groups on summary table, scoring categories, one way analysis of variances on 69 scoring categories of Rorschach, distinguishing and critical categories of psychotic depressives, schizophrenics and normals also confirm the diagnostic validity of Rorschach. The percentage of agreement between the judges, which were taken as indices of inter-scorer reliability, show 93% percentage of

agreement for psychotic depressives, 90% for schizophrenics and 90% for normals respectively. This shows that judges showed a high degree of congruence in scoring the responses of various groups into different categories of Rorschach. This demonstrates the reliability of various Rorschach indices as classification criteria.

As an additional measure of reliability between the scoring of the responses of psychotic depressives, schizophrenics and normals by the two judges Kendall's *tau B* was computed. The coefficient of relationship was 0.87, $p < .01$ for psychotic depressives, 0.93, $p < .005$ for schizophrenics and 0.93, $p < .005$ for normals respectively.

Split-half reliability was computed to find out the reliability of Rorschach as a measurement instrument. Rorschach test was divided into two odd and even halves and the total responses on major scoring categories of Rorschach on these cards, for three groups were correlated with each other. Split-half reliabilities for psychotic depressives, schizophrenics and normals are 0.69, 0.67, and 0.75 respectively. The reliabilities for the total test after applying Spearman Brown correction are 0.81, $p < .001$ for psychotic depressives, 0.80, $p < .001$ for schizophrenics and 0.85, $p < .001$ for normals respectively.

In study 2 the patterns of responses of psychotic depressives, schizophrenics determined in study 1 served the basis for classifying the unclassified sample of psychotics into psychotic depressives, schizophrenics and other psychotic females. For the three groups of post-classified sample of study 2, *Chi-square* analyses were also carried out on both distinguishing and critical categories of Rorschach to determine its discriminant validity. The three groups of psychotic depressive, schizophrenic and other psychotic females significantly differ from each other on both distinguishing and critical

categories of Rorschach. A significantly high *Chi-square* values on both distinguishing and critical categories is not only an indicator the discriminating qualities of these categories but can also be regarded as a valid measure of differential diagnostic characteristics of Rorschach.

Our study has successfully established the pattern of responses of psychotic depressives, schizophrenics and normals on Rorschach on various indices. Psychotic depressives are producing distinct patterns on distinguishing and critical categories including *W, D, d, Dd+S, FSum, A, Sex, V, EC, C', R* average, *SumC* and *Afr* ratio. Patterns of responses of schizophrenics on distinguishing and critical categories reveal that the group has produced distinct patterns on *W, D, d, Dd+S, SumC, W-, weak FLR, (M-), (M-)...Hd, CF+C, Pure C (C), Conf* and *Cont* response categories. Similarly the patterns of normals on distinguishing and critical categories show that normals differ from other groups on all the distinguishing and critical categories, especially, on *F sum, F+, EC, EB, W* and *O* responses. It is interesting to note that when these patterns were compared with the Western norms they produced some similarities and some differences. These differences in the Rorschach responses are said to be culture specific which should always be seen in the realm of our own cultural set up.

The results of the study clearly indicate that the Rorschach can be a useful diagnostic tool in differentiating psychotic depressives and schizophrenics from the normals. The universal critical categories used for differential diagnosis also apply in our case and our clinical population can be categorized on this basis.

However, the study has certain limitations. The study is restricted to females of age range between 25-45 years only. Hence, the results may not be descriptive of the sample

outside this age range. Thus, the findings of the study can not be generalized to the male population and other age groups. As the sample was restricted and relatively smaller groups of psychotic depressives and schizophrenics were studied, therefore, the patterns are to be established on more representative samples of mentally ill from all the four provinces of Pakistan.

Practical Implications of the Study

Our study represents a first step toward standardization of Rorschach for the Pakistani female population. In order to make broad based generalizations the data base has to be enlarged. More normative studies of the test are needed to determine psychometric characteristics of the test on different clinical groups of different age range and of both sexes.

Our data presents the norms which provide the descriptive information about the psychotic depressive, schizophrenic and normal groups. These norms presents a frame of reference against which individual subjects can be evaluated. Thus these norms should be used with latitude. Any deviation from the norms developed for the normal subjects cannot always be considered a sign of abnormality.

The results of the study indicate that Rorschach test is not culture-free. There are certain culture specific elements in the test results. While interpreting the test protocols, care should be exercised for these cultural differences.

SUGGESTION FOR FUTURE RESEARCH

On the basis of these results a large scale normative study should be carried out to establish the norms of psychotic depressives, schizophrenics and normals. This study may be extended to various groups of male and female of different age levels. The study can be extended to other clinical groups for differential diagnosis. Results of the study can be of great help in clinical use as a basic source of reference. Results of the study can be utilized for cross-cultural comparisons.

SUMMARY

This study was conducted to determine the pattern of responses of psychotic depressive, schizophrenic and normal females on Rorschach. The study also aimed at testing the discriminant validity of the Rorschach in classifying psychotic depressive, schizophrenic and normal females on critical and distinguishing categories of Rorschach. The study has also established split-half and inter-scorer reliabilities of Rorschach on all the major scoring categories. The sample consisted of 150 females of age group of 25-45 years. Among these 30 were normals, taken randomly from Rawalpindi city. The study was divided in two parts. In study 1 the sample consisted of 60 diagnosed inpatient psychotic depressive and schizophrenic females (30 in each) and 30 normal females. In study 2 sample comprised of two random groups of 60 (R1, R2) inpatient psychotic females, taken from Rawalpindi General Hospital and Mental Hospital, Peshawar. The sample of study 1 served as the main sample of the study, whereas, sample of study 2 was used for the validity study. Rorschach was administered to the subjects individually. All the procedures of administration and scoring were mainly Klopfer-Davidson based (1962). Only deviation made in terms of form level rating was according to Beck et al. (1961) criterion. The scores of critical categories including egocentricity index, morbid contents, reflection, affective ratio were computed as suggested by Exner (1974). For the determination of patterns of responses of psychotic depressives on the distinguishing and critical categories the criteria of Exner (1986) and Viglione, Brager and Haller (1988) and Archer and Gorden (1987) were adapted. The patterns of responses of schizophrenics on the distinguishing and critical categories were scored according to the criteria of Archer and Gorden (1987), Exner (1976) and Mahmood (1987). Results were reported in the form of frequencies, relative frequencies, ratios, proportions, mean and

ANOVA. In order to establish the discriminant validity of Rorschach for the sample of study 1 $k \times l$ *Chi-square* analyses were computed for classified psychotic depressives, schizophrenics and normals on both distinguishing and critical categories of Rorschach. For the discriminant validity of Rorschach for the sample of study 2 $k \times l$ *Chi-square* analyses were computed for post-classified psychotic depressives, schizophrenics and other psychotic females. Split-half reliability was established on Rorschach scores of major categories of three samples of study 1 including psychotic depressives, schizophrenics and normals. For the inter- scorer reliability, 90 protocols of psychotic depressives, schizophrenics and normals (30 in each) of study 1 were scored by another judge according to the same criterion as used by the author. Results of the study have established a high discriminant validity of Rorschach for psychotic depressive, schizophrenic and normal females on Rorschach's distinguishing and critical categories. The study has also demonstrated significantly high inter-scorer and split-half reliabilities of Rorschach on all the major scoring categories. Pattern analysis was done in many ways including patterns of three groups in the form of summary table, patterns of three groups on 69 scoring categories, patterns of three groups on all 69 scoring categories, patterns of three groups on distinguishing and critical categories and pattern summary. The pattern analyses revealed that the three groups of psychotic depressives, schizophrenics and normals form distinctive patterns of responses on Rorschach. When compared with the Western and Pakistani norms there was found to be a high correspondence between the two. However, there were certain scoring categories of Rorschach which could not discriminate the three groups and were regarded as culture specific. All ratios, averages, values on different Rorschach scores were found to be within the normal expectancy. Results also indicated that the normal group of Pakistani females was intelligent, showing generally balanced personality, strong drive of accomplishment and responsivity to outer stimulation. The normal group seemed to

sublimate their needs in an acceptable manner, whereas, the schizophrenic group showed impaired perceptual functioning, with deviant verbalization, poor judgement, inadequate controls of disturbed contents, preoccupations with aggressive and sexual fantasies and poor colour integration. The psychotic depressive group presented the clinical picture of loss of interest in self, low ego-centricity, greater number of morbid contents and greater right side experience balance.

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SYNTAX OF SCORING SYMBOLS

Location Scores

<i>W</i>	Whole response, blot is interpreted as a whole.
<i>W/</i>	Incomplete whole, at least 2/3 of the blot is used.
<i>DW</i>	Confabulatory whole, detail interpreted, with its meaning assigned to the whole blot inappropriately.
<i>D</i>	Large usual detail, a normal detail of the blot.
<i>d</i>	Small usual detail, easily marked off by space.
<i>dd</i>	Tiny detail.
<i>de</i>	Edge detail.
<i>di</i>	Inner detail.
<i>dr</i>	Rare detail, large or small detail combined with rare adjacent areas, or parts of usual areas, or unusual combinations of usual areas.
<i>S</i>	White space.

Determinant Scores

Form Score Interpretation is determined primarily by forms.

<i>F-</i>	Poor form.
<i>F+</i>	Form having good form.

Movement Scores Interpretation is determined by the movement.

<i>M</i>	Human movement, figure in human like action (human, mythological, animal).
<i>FM</i>	Animal movement, animal in animal like action.
<i>Fm, mF</i>	Inanimate movement in combination with form.

<i>m</i>	Inanimate movement without form, form excluded from consideration.
Colour Scores	Interpretation is determined by the colours.
<i>FC</i>	Chromatic colour in combination with form.
<i>C</i>	Chromatic colour without form, concrete association to bright colour, form and context disregarded.
<i>F/C, C/F</i>	Arbitrary combination of chromatic colour with form.
<i>FC', C'F</i>	Achromatic colour in combination with form.
<i>C'</i>	Achromatic colour without form.
<i>FC</i>	Form movement responses.
Shading Scores	
<i>Fc, cF</i>	Surface texture or appearance in combination with form.
<i>c</i>	Surface and texture response without form.
<i>FK</i>	Vista.
<i>KF</i>	Diffusion in combination with form.
<i>K</i>	Diffusion without form.
<i>Fk, kF</i>	Representative distance response in combination with form.
<i>k</i>	Representative distance without form.
Content Scores	
<i>H</i>	Human figures.
<i>Hd</i>	Parts of human figures.
<i>A</i>	Animal figures.
<i>Ad</i>	Parts of living animals.
<i>A Obj</i>	Fur skins, skulls, etc.
<i>At</i>	Human anatomy.
<i>A At</i>	Animal anatomy.
<i>Obj</i>	Man-made objects.

<i>N</i>	Nature.
<i>Geo</i>	Topographical and outline maps and geographical concepts.
<i>Sex</i>	Sexual responses.
<i>Eru</i>	Eruption.
<i>Pl</i>	Plants.
<i>Bl</i>	Blood.
<i>rf</i>	Reflection form responses.
<i>r</i>	Reflection responses.
<i>MSk</i>	Mask responses.
<i>(2)</i>	Pair responses.
<i>Cld</i>	Cloud.
<i>Fd</i>	Food.
<i>X-ray</i>	X-ray picture.
<i>Fi</i>	Fire.
<i>Col</i>	Colour.
<i>Arch</i>	Archaeology.
<i>(H)</i>	Monster, giant, superhuman.
<i>Fl</i>	Flag.
<i>Art</i>	Art design, painting, abstract design.
<i>MOR:</i>	
<i>H dep</i>	Depression, mourning.
<i>De</i>	Death, decay, desertedness, loneliness.
<i>Dep</i>	Generalized depression related to environment.

Popular-Original Scores

<i>P</i>	Popular response.
<i>O</i>	Original response.

***Basic Relationships and Their explanation**

Total responses or R	Total the number of responses given.
Total time or T	Total the time for the entire performance proper, express in minutes and seconds.
Average time per response, or T/R	Divide T by the total number of responses, express answer in seconds.
Average reaction time to achromatic cards	Total the reaction times to five achromatic cards (I, III, V, VII & IX) and divided by five. Express answers in seconds. Rejections are not counted in calculation.
Average reaction time for cards	As above for the five chromatic cards (II, IV, VI, VIII, & X)
$F\%$	Total all pure F responses, divide by R , and multiply by 100.
$\frac{FK+F+Fc}{R} \%$	Self-explanatory
$A\%$	Total the A and Ad scores, divided by R , and multiply by 100.
$(H + A): (Hd + Ad)$	Self-explanatory.
$SumC$	Use this formula: $\frac{FC+2CF+3C}{2}$
$M:SumC$	Self-explanatory.
$(FM + m): (Fc + c + C')$	Self-explanatory.
$(VIII+IX+X)\%$	Total the number of responses to the last three cards, divide by R and multiply by 100.
$W:M$	Self-explanatory.

Supplementary Relationships

$M:FM$	Self-explanatory
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$M:(FM + m)$	Self-explanatory
$(FK+Fc):F$	Self-explanatory
Achromatic:Chromatic	Compute the achromatic side of the ratio by adding the Fc , c and C 'scores. Compute the chromatic side of the ratio by adding the FC , CF and C scores.
Differentiated: Undifferentiated Shading	Total the differentiated shading responses, FK , Fk and Fc . Compare with the sum of the undifferentiated shading responses, K , KF , K , KF , c and cF .
$FC: (CF+C)$	Self-explanatory

**Adapted from Klopfer and Davidson (1962)*

BIO-DATA SHEET

Name

Sex

Age

Marital Status

Education

Hospital

Address

Diagnosis

Duration of Illness

Province

Date

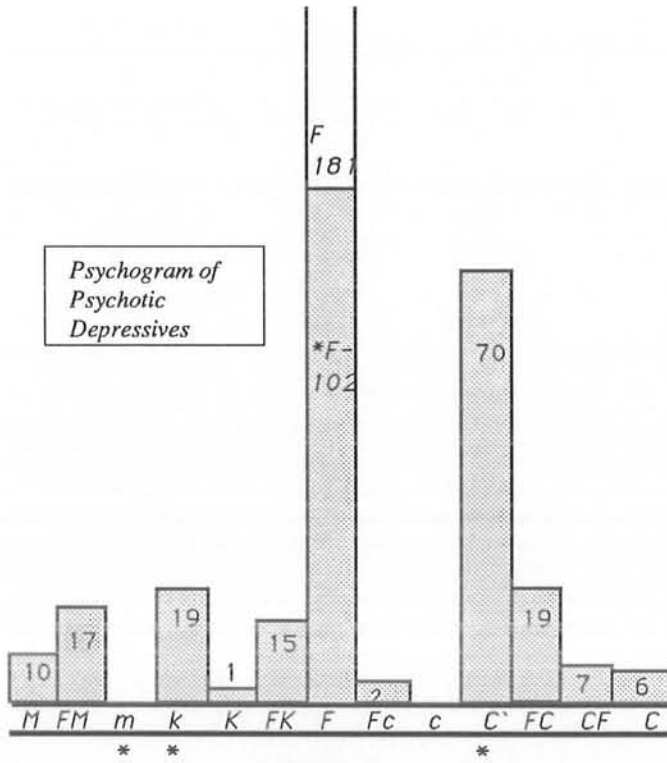


Figure 1

Cont...

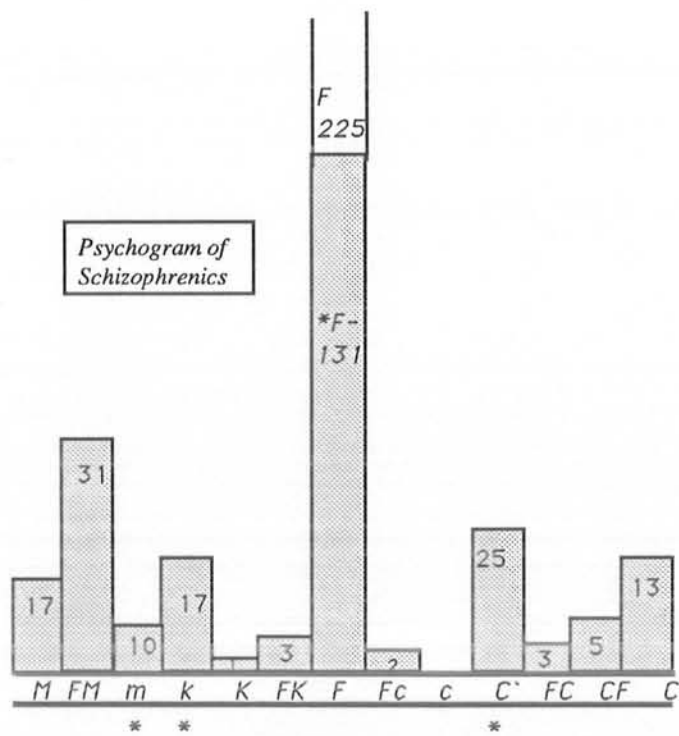


Figure 2

Cont...

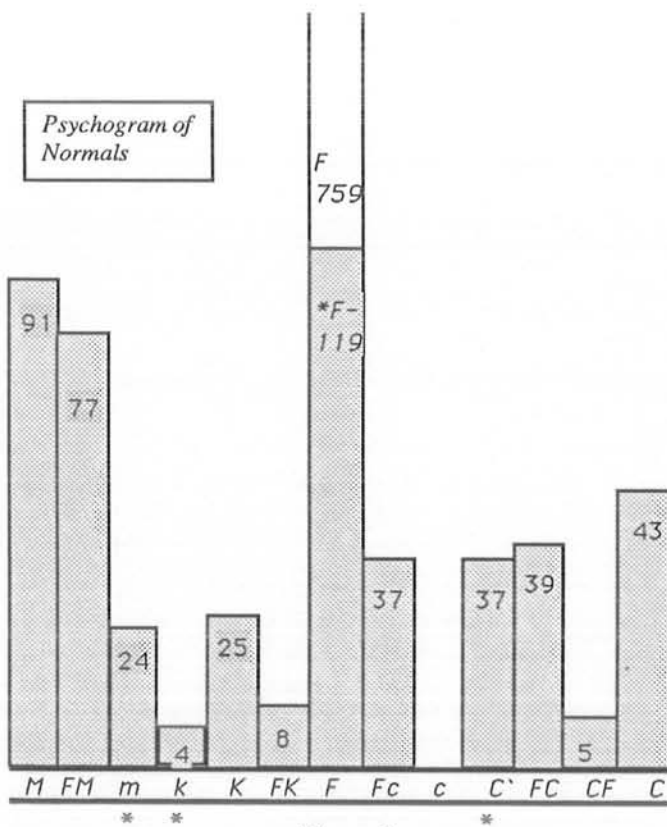


Figure 3

* *F*-responses should always be seen in proportion to the total *F* responses.

* *m* includes *Fm*, *mF* and *m*.

* *k* includes *FK*, *KF* and *k*.

* *C'* includes *C'F*, *FC'* and *C'*.