PROBLEM

Standardization of 'D' Test as a psycho-diagnostic tool for various types of psychoneuroses.

AIMS

i) To standardise the method of 'D' Test administration suited for the clinical population under study.

ii) To find out 'D' Test variables which differentiate significantly Anxiety neurotics, Hysterics, Obsessive-Compulsive neurotics from Normals; and Anxiety neurotics, Hysterics and Obsessive-Compulsive neurotics from each other.

iii) To find out the reliability of those variables which differentiate psychoneurotics and Normals; and psychoneurotics independently in all the groups.

iv) To develop a scoring procedure to detect different type of neurotic traits, on the basis of which diagnostic labels can be given.

TOOLS

i) 'D' Test Blanks: 'D' Test, a projective drawing test, consists of four pages. On each of the first three pages, there are four rectangles with two to four lines inside each rectangle. Fourth page of the 'D' Test contains a rectangle without lines. Dosajh (1960) used this test as a parallel test while standardizing Horn-Hellersberg Test for measuring
imagination and emotional maturity.

ii) HORN-HELLERS BERG TEST (H.H.TEST)

H.H.Test consists of four pages. On each of the first three pages, there are four squares with few lines in each square. These lines are not arbitrary but were taken from the famous paintings of Charles Horn, a teacher of Art at the Rochester Atheneum and Mechanical Institute. The fourth page of H.H. Test contains a square without lines. Hellersberg (1950) standardised H.H.Test for evaluating an individual's relation to reality in American culture.

iii) RORSCHACH TEST: Standard Rorschach ink-blot cards (Herman Rorschach Psycho-diagnostic Taflen plates 1921). There are ten ink-blots printed on cards 7 x 9½ inches and are numbered from 1 to X.


v) STOP WATCH.

vi) SPHYGMOMANOMETER AND STETHOSCOPE

vii) SIMPLE G.S.R. METER (SIMPLE WHEAT STONE BRIDGE CONNECTIONS IN A WOODEN BOX).

viii) FULL SIZE MIRROR.

ix) TAPE RECORDER.
POPULATION AND SAMPLE

PSYCHIATRIC POPULATION

Constituted of paying and non-paying patients of both the sexes in the age range of 18 years to 40 years who consulted the Psychiatrists of various Hospitals (Government Medical College, Rohtak; G.B.Pant Hospital, Delhi; and Command Hospital, Chandigarh) where the diagnosis of Psychoneuroses of various types was offered. No patient was included if the anxiety, hysterical and obsessive-compulsive symptoms were incidental to another major psychiatric disorder like schizophrenia or organic brain disorder. One sample was drawn from this population.

PSYCHIATRIC SAMPLE

Psychiatric sample constituted of those 100 Anxiety neurotics, 100 Hysterics and 100 Obsessive-Compulsive neurotics, who voluntarily offered themselves for any psychological testing and whose diagnostic label was disclosed to the experimenter before they were sent for the testing.

NORMAL POPULATION

P.C.I. Health Questionnaire N-1 was administered individually to 350 unselected adults in the age range of 18 to 40 years of both the sexes. 220 adults who came in the range

*The demographic characteristics such as age and education of the Psychiatric sample are given on page 78-80 in Chapter IV: DATA and RESULTS.
of normality were further taken to the same psychiatrists who offered the diagnosis of the subjects of Psychiatric population. 150 adults out of the total of 220 adults were declared as persons who lie in the range of normality and formed the Normal population. One sample was drawn from this population.

*NORMAL SAMPLE is constituted of 100 subjects who voluntarily offered themselves for any psychological testing and whose diagnostic label (Normal) was disclosed to the experimenter when they were sent for 'D' test administration.

SAMPLE FOR RELIABILITY is constituted of randomly selected 20 Anxiety neurotics, 20 Hysterics and 20 Obsessive-Compulsive neurotics from the Psychiatric Sample and 20 subjects from the Normal Sample.

SAMPLE FOR VALIDITY is constituted of 80 individuals including three types of Psychoneurotics i.e. Anxiety neurotics, Hysterics and Obsessive-Compulsive neurotics and Normals, whose diagnostic label was not disclosed to the experimenter.

PART FIRST.

PILOT STUDY. 'D' Test was administered according to the procedure set by Dosajh (1960), individually to 107 out-door patients in G.B. Pant Hospital, Delhi. It was noted that some patients

* Demographic characteristics i.e. age and educational status of the Normal Sample are given on Page 78 to 80 in Chapter-IV DATA AND RESULTS.
reacted differently when they were told to complete the test within 1½ hours. Some patients told that they would have selected the last page of the 'D' Test blanks first, had it been given along with the first three pages. Interestingly enough one patient said, "Can't you give me coloured pencils? I want to beautify my drawings". One patient developed rashes all over the body and the test had to be discontinued. He complained of itching and palpitation just after listening to the instructions for completing the test. Another patient left the test in between while the experimenter was recording the observations in the observation form. Another patient complained that he got confused to see the experimenter writing something about his drawings during the enquiry stage.

The experimenter decided to ask every patient who-so-ever complained about anything during the test situation and told them to write how they felt during the test and about the test procedure. Most of the patients complained in their report that they felt time conscious. One patient wrote that he started having headache and pain in the arm because of the difficult drawings, so he left the test in between. Some of them revealed guilt and feeling of inferiority about the drawings which they made. One patient started weeping when he was asked to explain his drawings. With the exception of few, most of the patients complained of restlessness, palpitation and itching during the test. Restlessness and palpitation may be attributed to some variations in the blood pressure and itching may be due to some variation in the sensitivity of the skin. After all these
observations during the pilot study, the experimenter felt the need for altering the procedure for administration of the 'D' Test set by Dosajh (1960) for measuring Imagination and Emotional Maturity. The following changes were made:

1. All the four pages of the 'D' Test blanks were given together instead of giving fourth page of the 'D' Test blanks after the subject completed the first three pages of 'D' Test blanks.

2. No time limit was set to complete the test. Reaction time and Total Time were recorded.

3. Galvanic Skin Response, Systolic Blood Pressure and Diastolic Blood Pressure were recorded before and after the test.

4. Motor movements and other expressions of the patients were not observed directly. A full size looking glass was fixed in the room in such a direction as to see the patients' expressions and other movements, while sitting at a distance without facing the patient.

5. Tape recorder was placed under the testing table to record all the conversation without the knowledge of the patient, instead of writing down the relevant

*Galvanic Skin Response (G.S.R.) was recorded with the simple G.S.R. meter (Wheat stone bridge connections in a wooden box assembled by the experimenter). The preparation of the G.S.R. meter and its working is explained in Appendix-E. The experimenter contacted various agencies in Punjab, Haryana, Chandigarh and Delhi in 1971 but no such apparatus was available at that time.
conversation. To record the behavioural and physiological changes during the test, the experimenter prepared the observation form keeping in view his experiences during the pilot study and a few relevant researches. The following variables were included in the Observation Form:

i) Systolic and Diastolic blood pressure before and after the administration of 'D' Test, were recorded keeping in view the studies of Gaskill and Cox (1941), Jacques (1946), Malmo, Shagass and Heslam (1951), Jurko, Jost and Hill (1952) and Malmo and Shagass (1952).

ii) G.S.R. before and after the administration of 'D' test was recorded keeping in view the studies of Rockwell, Welch, Fisichelli and Kubis (1946); Jacques (1946), Schiff, Dugan and Welch (1949); Bitterman and Holtzman (1952); Jurko, Jost and Hill (1952); Uherik (1961); Perez, Shands and Johnson (1962); Handler and Reyher (1966); Forrest and Diamond (1966); Jordan and Kempler (1970) and Kilpatrick (1972).

iii) Reaction Time and Total Time were recorded as suggested by Dosajh (1972).

iv) Behaviour during the test was noted as stressed by Karpov (1926); Hellersberg (1945); Kadis (1950); Levy (1950); Dosajh (1956); Harrower (1967) and Dosajh(1972).

The experimenter found during the pilot study that some patients started weeping when they were asked to explain "How they arrived at the decision of making a particular drawing."
Whereas others revealed their conflicts, guilt and feeling of inferiority etc. through their drawings, some patients revealed their conflicts when they were asked to explain their disliking, indifference and preferences for the test material. Keeping in view these experiences and the researches of Hellersberg (1945); Dosajh (1956, 1960 and 1972); Jolles (1967); Hammer (1967) and Buck (1967), the experimenter decided to take Post-Drawing Interview after the subject finished the drawing task.

PART SECOND

ADMINISTRATION OF *D* TEST

"D" Test was administered individually to all the subjects of Psychiatric Sample and Normal Sample according to the procedure which is as follows: Rapport was established with the subject and he was made comfortable. Blood pressure and G.S.R. were recorded. The following instructions were given to the subject in his own language:

"You shall be provided with four paper sheets having 13 rectangles, 12 on the first three pages i.e. four rectangles on each page, and each rectangle having some lines and the fourth page having one rectangle without lines. Make a picture in each rectangle with the help of the given lines (where lines are given) and draw anything you like in the rectangle on the last page. You can turn the page in any direction you like and you may start from any rectangle. You can use any pencil you like and if you need eraser, here it is. There is no time limit for
the test but try to finish it as early as you can."

A full size locking glass was fixed in such a direction as to note the expression and other motor movements of the patient without his knowledge. A tape recorder was placed under the testing table to record any conversation which took place between the patient and the experimenter during the test situation. Care was taken neither to lead the patient to any conversation nor to sit face to face while the patient was busy in drawing. 'D' Test observation form was filled by the experimenter without distracting the attention of the patient while he was making the drawings. The blood pressure and G.S.R. were recorded after the drawing task was over. Post drawing interview was taken to know what the subject had drawn in each rectangle and how he thought of drawing a particular drawing, if the subject had used coloured pencils and eraser; then he was asked to explain why he had used the coloured pencil and the eraser. If the subject had done shading, he was asked to explain why he had done shading. The subject was asked to give his comments how he felt about the test. All this was recorded with the help of the tape recorder and the relevant information was filled in the respective scoring sheets.

**Analysis of the 'D' Test Data**

The following four types of data was obtained:

1) Drawings.
2) Time and Physiological Observations.
3) Behavioural Observations.
4) Post-Drawing Observations.
Each drawing was analysed with the help of 'D' Test-Analysis record Blank No.1 (Appendix-III). After filling the identifying data i.e. name, age and educational status of the subject, each drawing category given on the left side of the 'D' Test Analysis Record Blank No-1 was analysed against all the rectangles in which drawings were made. Score of "ONE" was given to the positive response and score of "ZERO" was given to the negative response in each rectangle. The number of "ONE" scores were added to obtain the total "Raw Scores" in each respective drawing category. The raw scores in each category were converted into percentage by:

\[
\text{Percentage} = \frac{\text{No. of Scores obtained}}{\text{Total No. of Rectangles}} \times 100
\]

Time and physiological observations made during the test were recorded with the help of 'D' Test Analysis Record Blank No.2-A (Appendix IV) and 'D' Test Analysis Record Blank No.2-B (Appendix V) respectively. Reaction Time in seconds and Total Time in minutes which were recorded in Blank No.2-A were taken as raw scores. The "Rise" in Systolic blood pressure, Diastolic blood pressure and Galvanic Skin Response after the administration of the 'D' Test were marked as "+", Fall as "-" or No Change as "x" in column No.3 of 'D' Test Analysis Blank No.2-B. Any difference in Systolic blood pressure, Diastolic blood pressure and G.S.R. in m.m Hg and m.ohms respectively were taken as raw scores and are recorded in 'D' test Analysis Record Blank No.2-B.

*Total No. of Rectangles is "13" for all the Drawing Categories except for LINES OVER-LOOKED (LOL), COMPULSIVE USE OF THE LINES (CUL) AND WHOLE (w), IN WHICH Total No. of Rectangles are "12".
Behaviour which the subject manifests during each drawing while taking the test was recorded with the help of Observation Form (Appendix-IX) and was scored with the help of 'D' Test Analysis Record Blank No.3 (Appendix. IV). Each "✓" response was given the score of "ONE" and "X" response was given "ZERO" score in each rectangle for each Behavioural Observation. The number of "ONE" scores were added for each behavioural observation and were converted into "YES" or "NO" response with the help of the following formula:

\[
\frac{\text{Total No. of scores obtained}}{\text{Total No. of rectangles drawn}} \times 100 = \begin{cases} 
70\% \text{ and above} & \text{YES} \\
\text{Below 70\%} & \text{NO}
\end{cases}
\]

Post-Drawing Interview regarding the content and other aspect of the drawing in relation to the feeling of Guilt, Inferiority, Conflict, Emotional outburst and Vague and irrational reasons to justify the content and other aspects of the drawing such as shading, line quality, erasure, use of coloured pencils etc., were recorded on the tape recorder and scored with the help of 'D' Test Analysis Record Blank No.4 (Appendix VII). Score of "ONE" was given to the positive response and score of "ZERO" was given to the negative response to each drawing for each Post-Drawing Observation. The total number of "ONE" scores were added and were converted into "YES" or "NO" response with the help of the following formula:

\[
\frac{\text{No. of scores obtained}}{\text{Total No. of Rectangles Drawn}} \times 100 = \begin{cases} 
70\% \text{ and above} & \text{Yes} \\
\text{Below 70\%} & \text{No}
\end{cases}
\]
Statistical Analysis of the 'D' Test Data

The raw scores obtained for each Drawing category, Time observation and Physiological observation on 'D' Test in four groups did not fulfill the requirements of Normal Probability. Therefore, The Kruskas-Wallis One Way Analysis of Variance by Ranks "H" (Siegel, 1956), was calculated for each of the forty-one Drawing categories; two Time observations and three Physiological observations independently, to differentiate Anxiety neurosis (AN), Hysterical neurosis (HYS), Obsessive-Compulsive neurosis (OCN) and Normals (NOR) (First hypothesis) and Anxiety neurosis (AN), Hysterical neurosis (HYS) and Obsessive-compulsive neurosis (OCN) (Second hypothesis). For each Physiological observation Rise (+), Fall (-) or No Change (x) signs were eliminated while calculating the "H". To find out the significance of difference for each Physiological Observation in relation to Rise (+), Fall (-) or No Change (x) Chi-square $\chi^2$ (Garrett, 1967) was calculated among Anxiety neurosis (AN), Hysterical neurosis (HYS), Obsessive-Compulsive neurosis (OCN) and Normals (NOR) First hypothesis and among Anxiety neurosis (AN), Hysterical neurosis (HYS) and Obsessive-Compulsive neurosis (OCN) Second hypothesis.

To find out the significance of difference for each ten behavioural and five Post-Drawing observations in relation to "YES" and "NO" responses, Chi-square $\chi^2$ (Garrett, 1967) was calculated between AN, HYS, OCN and NOR First hypothesis and AN, HYS and OCN Second hypothesis.
All the drawing categories which were significant at .01 level were included in 'D' Test Scoring Blank No.1 (Appendix-VIII).

Time observations and physiological observations which were significant at .01 level were included in 'D' Test Scoring Blank No.2-A (Appendix-IX) and 2-B (Appendix-X) respectively. Behavioral Observations which were significant at .01 level were included in 'D' Test Scoring Blank No.3 (Appendix-XI). Post-Drawing Observations which were significant at .01 level were included in 'D' Test Scoring Blank No.4 (Appendix-XII).

PART THIRD

RELIABILITY

Keeping in view the relevant researches dealing with the reliability of projective techniques, the experimenter decided to determine the reliability of the 'D' Test variables by using parallel form (Horn - Hollingshead Test) method. H.H. Test (Parallel Form) was administered individually (according to the procedure set by the experimenter for 'D' Test administration mentioned on Page 61-62) to all the subjects of Reliability Sample. The following four types of data was obtained on H.H. Test like that of 'D' Test.

i) Drawings.

ii) Time and Physiological observations.

iii) Behavioral observations.

iv) Post-Drawing Observations.
Analysis of the Drawings obtained on H.H. Test.

Each drawing was analysed with the help of 'D' Test Analysis Record Blank No.1. Each drawing category given on the left side of the scoring blank was analysed against the drawings made in each rectangle of H.H. Test blanks. Score of ONE was given to the positive response and ZERO was given to the negative response in each rectangle. The number of ONE scores were added to obtain the raw scores in each drawing category.

Analysis of Time Observations on H.H. Test.

Reaction Time and Total Time in seconds and minutes respectively were taken as raw scores and were recorded in 'D' Test Analysis Record Blank No.2-A.

Analysis of Physiological Observations on H.H. Test.

Any difference in Systolic blood pressure, Diastolic blood pressure and Galvanic skin response (G.S.R.) on H.H. Test in m.m.Hg and m.ohms respectively were taken as raw scores of the respective Physiological observations and were recorded in 'D' Test Analysis Record Blank No.2-B. Rise in the above mentioned Physiological observations was marked as "+", Fall as "-" and No Change as "X" in 'D' Test Analysis Record Blank No.2-B.

Analysis of Behavioural Observations on H.H. Test.

Behaviour which the subject manifested during each drawing task on H.H. Test was recorded with the help of observation form and was scored with the help of 'D' Test Analysis Record.
Blank No.3. Each "✓" response was given the score of ONE and "X" response was given ZERO score in each rectangle for each Behavioural observation. The number of ONE scores were added to obtain total scores in each Behavioural observation and were converted into YES and NO responses with the help of the following formula:

\[
\text{Total Scores} = \frac{\text{Total No. of rectangles drawn}}{\text{Total No. of rectangles drawn}} \times 100 = 70\% \text{ and above} = \text{YES}
\]

Analysis of Post Drawing Observations on H.H.Test.

Post drawing interview regarding the content of the drawings on H.H.Test in relation to the feeling of Guilt, Inferiority, Conflict, Emotional Out-bursts and Rationalization, which were tape recorded, were scored with the help of 'D' Test Analysis Record Blank No.4. Score of ONE was given to the positive response and score of ZERO was given to the negative response. In all the rectangles for all the post drawing observations the number of ONE scores were added to obtain total scores in each post drawing observation and were converted into YES and NO response with the help of the following formula:

\[
\text{Total scores} = \frac{\text{Total No. of rectangles drawn}}{\text{Total No. of rectangles drawn}} \times 70\% = \text{YES} \quad \text{Below 70\%} \quad \text{= NO}
\]

Statistical Analysis of Scores obtained on H.H.Test & 'D' Test.

Spearman Rank Correlation "rho" (Siegel, 1956) was calculated between the raw scores of each Drawing category, Time observation and Physiological observation obtained on H.H. Test
and raw scores of corresponding Drawing category. Time observation and Physiological observation on 'D' Test in four groups i.e. Anxiety neurotics (AN), Hysterical neurosis (HNS), Obsessive-Compulsive neurosis (OCN) and Normals (NCR) independently. Rise (+), Fall (-) or No Change (x) signs were eliminated in Physiological observations while calculating "rho".

The percentage agreement for Rise (+), Fall (-) or No Change (x) in each Physiological observations on H.H. Test and its corresponding observation on 'D' Test was calculated. Phi-coefficient "\( \phi \)" (Garrett, 1967) was calculated for "Yes" and "No" responses of each Behavioural and Post Drawing observation on 'H.H.' Test and for "Yes" and "No" responses of each corresponding Behavioural and Post-Drawing observation on 'D' Test in all the four groups i.e. AN, HNS, OCN and NCR separately.

Those Drawing categories whose values of "rho" were significant at .01 level were called Diagnostic categories and were included in 'D' Test Diagnostic Blank No.1.

Time observations and Physiological observations whose values of "rho" were significant at .01 level were called Diagnostic observations and were included in 'D' Test Diagnostic Blank No.2-A and 2-B respectively. The Behavioural and Post Drawing observations whose values of Phi-coefficient "\( \phi \)" were significant at .01 level were called Diagnostic observations and were included in 'D' Test Diagnostic Blank No.3 and 'D' Test Diagnostic Blank No.4 respectively. On the basis of above Diagnostic Categories and Observations a scoring criterion was made which is as follows:
'D' Test Diagnostic Blank No. 1

The number of individuals of Psychiatric Sample (100 Anxiety neurotics, 100 Hysterics and 100 Obsessive-Compulsive neurotics) and Normal Sample (100 normals) are plotted against the class interval of scores in terms of percentages for each 'D' Test Diagnostic Drawing categories which differentiate AN, HYS, CCN and NOR significantly at .01 level (First hypothesis) AN, HYS and CCN significantly at .01 level (Second hypothesis) or either of the two.

The subject is placed in a particular class interval of percentage in relation to the percentage, which he or she obtains in each Diagnostic Drawing Category. The maximum frequency is located for that particular class interval out of the given groups* for which blank circles given under the respective zone. The given circle in the corresponding zone is blackened. Likewise the subject is placed in respective zone for all the Diagnostic Drawing Categories. The number of the blackened circles are counted for all the four zones. The maximum blackened circles in a particular zone reflect the greater chances of the subject being Neurotic or Normal of that particular zone in relation to the Diagnostic Drawing Categories (As shown in Appendix-A, B, C and D).

'D' Test Diagnostic Blank No. 2-A

The number of individuals of psychiatric population and of normal population are plotted against the class interval of

* The blank circles are given in these groups in which the value of reliability coefficient is significant at .01 level.
scores in terms of percentage for each 'D' Test Diagnostic Drawing Category. The subject is placed in a particular class interval of scores in relation to the scores which he or she gets in each time observation. The maximum frequency is located for that particular class interval out of the given four groups i.e. A, B, C, and D. The given circle in the corresponding zone is blackened. Likewise the subject is placed in respective zone for both the time observations. The number of blackened circles are counted for all the four zones. The maximum number of blackened circles in a particular zone reflect the greater chances of the subject being Neurotic or Normal of that zone in relation to the time observations. (As shown in Appendix A, B, C, and D).

'D' Test Diagnostic Blank No. 2-B.

The number of individuals of psychiatric population and of normal population are plotted against the class interval of scores in terms of mm Hg. for systolic and diastolic blood pressure and in terms of m.chas for G.R.K. difference before and after the 'D' test administration.

The number of individuals who show Rise (+), Full (-) or No Change (X) for the systolic blood pressure, diastolic blood pressure and Galvanic Skin Response after the administration of 'D' test are shown in the respective signs for all groups.

The subject is placed in a particular class interval of scores in relation to the scores which he gets in each physiological observation. The maximum frequency is located for
that class interval out of the given groups in which the blank circles are given under the respective zone. The blank circle is given for that group in which the value of reliability coefficient is significant at .01 level. The given circle in the corresponding zone is blackened. Likewise, the subject is placed in the respective zone for all the Physiological observations. The number of blackened circles are counted for all the four zones. The maximum blackened circles in a particular zone reflect the greater chances of the subject being Neurotic or Normal of that particular zone in relation to Physiological observations.

Similarly the sign for each physiological observation is located from the maximum frequency and the circle is blackened in the corresponding zone. The number of blackened circles are counted for all the zones. The maximum blackened circles in a particular zone reflect the greater chances of the subject being Neurotic or Normal of that particular zone in relation to "Sign" in physiological observations. (As shown in Appendix A, B, C and D).

'D' Test Diagnostic Blank No. 3

The number of "Yes" and "No" responses of all the individuals in Anxiety neurosis (AN), Hysterical neurosis (HYS), Obsessive-Compulsive neurosis (OCN) of Psychiatric Population and Normals (NOR) of Normal population are given for each 'D' Test Diagnostic Behavioural Observation. The maximum frequency of the "Yes" or "No" response which the individual gets is located out of the given groups. The blank circle is given for that group whose value of reliability coefficient is significant at .01 level.
The given circle in the corresponding zone is blackened. Likewise the individual is placed in the respective zone for all the Behavioural Observations. The number of blackened circles are counted for all the four Zones i.e. AN-Zone, HYS-Zone, OCN-Zone and NOR-Zone. The maximum blackened circles in a particular zone reflects the greater chances of the individual being Neurotic or Normal of that particular zone in relation to the Behavioural Observations (As shown in Appendix A, B, C and D).

'D' Test Diagnostic Blank No. 4

The number of "Yes" and "No" responses of all the individuals in Anxiety neurosis (AN), Hysterical neurosis (HYS), Obsessive-Compulsive neurosis (OCN) of Psychiatric Population and Normals (NOR) of Normal Population are given for each 'D' Test Diagnostic Post-Drawing Observation. The maximum frequency of the "Yes" or "No" response which the individual gets is located out of the four groups for each Post Drawing Observation. The blank circle is given for that group in which the value of reliability coefficient is significant at .01 level. The given circle in the corresponding zone is blackened. Likewise the individual is placed in the respective zone for all the Post-Drawing observations. The number of blackened circles are counted for all the four zones i.e. AN-Zone, HYS-Zone, OCN-Zone and NOR-Zone. The maximum blackened circles in a particular zone reflect the greater chances of the subject being Neurotic or Normal of that particular zone in relation to the Post-Drawing Observations. (As shown in Appendix A, B, C and D).
Formation of 'D' Test Psycho-Gram.

After filling all the four 'D' Test Diagnostic Blanks Nos. 1, 2-A, 2-B, 3 and 4, the scores obtained through these Diagnostic Blanks for all the four zones i.e. AN-Zone, HYS-Zone, OCN-Zone and NOR-Zone are pooled for each Zone in 'D' Test Psycho-Gram. The maximum scores obtained by the individual in a particular zone reflect the greater chances of that individual being Neurotic or Normal of that zone in relation to the four types of data on 'D' Test (As shown in Appendix A, B, C and D).

PART FOURTH

VALIDITY

The interpretation of projective drawings without sufficient experimental validation rarely supplies information and often misleads the clinician who is forced to generalise his reckless and impulsive finding. In order to get rid of the insecurity endangered by speculations, projective drawing techniques should rely more on experimentally oriented method of personality analysis. This can only be done when the stress is laid on their validation. Most of the studies concerning validation of projective drawings have laid more stress on coefficient of correlation only ignoring the strength of the criterion against which validation is done. What should be the properties so that the criterion should be viewed as the true measure of what a test is designed to measure? The criterion should be objective and valid.
Keeping in view the objectivity and validity of the criterion, psychiatric rating and Rorschach Test were used as an external criteria to determine the validity of the 'D' Test.

**Psychiatric Rating.**

The psychiatric rating of all the subjects of validity sample was based on

i) Opinion of one or two house surgeons of psychiatric Units, who took the case history of the patient independently.

ii) The opinion of the expert who took the case history under pentathol intravenous injection.

iii) Psychologist's opinion was sought in those cases where house physicians and the expert (who took the case history under pentathol) did not agree and the Psychologist gave his opinion on the basis of psychological testing which included T.A.T., Rorschach Test, Draw-a-person Test, Picture Frustration Test and objective questionnaire wherever necessary and finally on the basis of the interview with the Psychiatrist.

**Rorschach Test as an external criterion.**

In order to eliminate the factor of subjectivity, Rorschach Test was not administered by the experimenter to all the subjects (of validity sample) to whom 'D' Test was administered individually by the experimenter, otherwise it would have created a bias in validation.

**Validity against the Psychiatrist Diagnosis.**

The experimenter requested the Psychiatrist to send 80 individuals including psychoneurotics of three types (Anxiety neurotics, Hysterics and Obsessive-Compulsive neurotics)
and Normals for 'D' Test administration without disclosing their diagnosis to the experimenter. The psychiatrist was requested to write their diagnosis along with the name of these Psychoneurotics and Normals on separate slips. 'D' Test was administered individually to these 80 Psychoneurotics and Normals according to the procedure set by the experimenter mentioned on Page 61-62. Each individual was diagnosed with the help of the 'D' Test Psycho-gram and the diagnosis of each of the 80 Psychoneurotics and Normals was written on separate slips along with the name of the subject. The slips on which the diagnosis on the basis of the 'D' Test Psycho-gram was written were matched with the slips prepared by the psychiatrist to see the agreement between the 'D' Test Diagnosis and Psychiatrist Diagnosis in all the four groups.

ii) Validity with the Rorschach Test Diagnosis.

80 Psychoneurotics and Normals diagnosed by the Psychiatrist on the basis of the Psychiatric interview and by the experimenter through the 'D' Test, were sent individually to the Clinical Psychologist of the same hospital for the administration of the Rorschach Test. The experimenter requested the Clinical Psychologist to write the diagnosis of the each case on a slip alongwith the name or the registration number of that individual. The diagnostic slips prepared by the clinical Psychologist on the basis of the Rorschach Test and diagnostic slips prepared by the experimenter on the basis of the 'D' Test Psycho-gram were compared to see the agreement between 'D' Test and the Rorschach Test in all the four groups.