CHAPTER 3
AIMS AND OBJECTIVES & METHODOLOGY
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2. Methodology

1. Aims and Objectives:

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1. **Aims and Objectives:**

   Its divided in to two subheadings as mentioned above:

1. **A. Significance of the Study:**

   No any single study has been done on cognitive mediation cluster in India. Most of study has done on particular one or two variable of Rorschach Ink Blot Test. It is also known that many studies have done with Beck’s interpretation system. In Gujarat, Exner Comprehensive System has been not used by researcher. So, present study is a new study in Gujarat regarding Cognitive mediation and Exner Comprehensive system.

1. **B. Aims and Objectives:**

   1) To compare Form Appropriate Extended (XA%) between in participants with Mania and Normal healthy subjects, participants with Depression and Normal healthy subjects and participants with Schizophrenia and Normal healthy subjects.

   2) To compare Form Appropriate Extended (XA%) between participants with Mania and Depression, participants with Mania and Schizophrenia and participants with Depression and Schizophrenia.

   3) To compare Form Appropriate Common Areas (WDA%) between in participants with Mania and Normal healthy subjects, participants with Depression and Normal healthy subjects and participants with Schizophrenia and Normal healthy subjects.
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4) To compare Form Appropriate Common Areas (WDA%) between participants with Mania and Depression, participants with Mania and Schizophrenia, participants with Depression and Schizophrenia.

5) To compare Conventional Form (X+%) between in participants with Mania and Normal healthy subjects, participants with Depression and Normal healthy subjects and participants with Schizophrenia and Normal healthy subjects.

6) To compare Conventional Form (X+%) between participants with Mania and Depression, participants with Mania and Schizophrenia and participants with Depression and Schizophrenia.

7) To compare Unusual Form (Xu%) between in participants with Mania and Normal healthy subjects, participants with Depression and Normal healthy subjects and in participants with Schizophrenia and Normal healthy subjects.

8) To compare Unusual Form (Xu%) between participants with Mania and Depression, participants with Mania and Schizophrenia and participants with Depression and Schizophrenia.

9) To compare Unusual Form (X-%) between in participants with Mania and Normal healthy subjects, in participants with Depression and Normal healthy subjects and participants with Schizophrenia and Normal healthy subjects.
10) To compare Unusual Form (X-%) between participants with Mania and Depression, participants with Mania and Schizophrenia and participants with Depression and Schizophrenia.

11) To compare Popular Response (P) between in participants with Mania and Normal healthy subjects, participants with Depression and Normal healthy subjects and participants with Schizophrenia and Normal healthy subjects.

12) To compare Popular Response (P) between participants with Mania and Depression, participants with Mania and Schizophrenia and participants with Depression and Schizophrenia.

2. Methodology:

The second important part of this study is Methodology. It has consisted Hypothesis, Design, Variables, Descriptions of Dependent Variables, Venue, Sampling Techniques, Sources of Data, Sample, Tools used, Statistics and Procedure which are mentioned as above content at starting of this chapter.

2.1. Hypothesis:

1. There will be no significance difference in terms of XA%, WDA%, X+, Xu%, X-% and P between in participants with Mania and Normal healthy subjects.

2. There will be no significance difference in terms of XA%, WDA%, X+, Xu%, X-% and P between in participants with Depression and Normal healthy subjects.
3. There will be no significance difference in terms of XA%, WDA%, X+, X%, X-% and P between in participants with Schizophrenia and Normal healthy subjects.

4. There will be no significance difference in terms of XA%, WDA%, X+, X%, X-% and P between in participants with Mania and Depression.

5. There will be no significance difference in terms of XA%, WDA%, X+, X%, X-% and P between in participants with Mania and Schizophrenia.

6. There will be no significance difference in terms of XA%, WDA%, X+, X%, X-% and P between in participants with Depression and Schizophrenia.

2.2. Design:
The present study was a cross sectional hospital based study, which has used X facto experimental design used.

2.3. Variables:


2.3.B. Dependent Variables:
Cognitive Mediation included five clusters of variables that are:

1. Form Appropriate Extended (XA+)%
2. Form Appropriate Common Areas (WDA%)
3. Conventional Form Use (X+)%
4. Unusual Form Use (Xu%)

5. Distorted Form (X-%)

6. Popular Response (P)

2.3.C. Controlled Variables:

The participants were controlled regarding age, gender, education, religion etc. in each group. Unfamiliar and new participants were selected for Rorschach Test. The environment and test room kept noiseless.

2.4. Description of Dependent variables related to Cognitive Mediation:

2.4.1. Form Appropriate Extended (XA+%): The variable concerns the proportion of responses in which there is an appropriate use of form features. It is calculated as:

$$\text{XA\%} = \frac{\text{Sum of } F+F_o+F_u}{R}$$

2.4.2. Form Appropriate Common Areas (WDA%):

This variable concern the proportion of responses given to W and D areas in which there is an appropriate use of form features. It is calculated as:

$$\text{WDA\%} = \frac{\text{Sum of } W+D \text{ responses with } FQ \text{ coding of } +, o \text{ and } u}{R}$$

2.4.3. Conventional Form Use (X+%): This variable concerns the extent to which the appropriate use of form features has included common object definitions. It is calculated as:
2.4.4. **Unusual Form Use (Xu%)**: This variable concerns the extent to which the appropriate use of form features has included uncommon object definitions. It is calculated as:

\[ Xu\% = \frac{\text{Sum } FQ^+ \text{ and } 0}{R} \]

2.4.5. **Distorted Form (X-%)**: Distorted Form: This variable concerns the proportion of answers in which form use is not commensurate with the blot features. It is calculated as:

\[ X-% = \frac{\text{Sum } FQ^=}{R} \]

2.5. **VENUE**:

- Mental health Clinic, Surendrangar, Gujarat (India)
- Mental Hospital, Ahmedabad, Gujarat (India).

2.6. **SAMPLING TECHNIQUE**:

Purposive sampling technique was utilized for data collection.

2.7. **Source of Data**:

- **Primary Data**: Questionnaire, Interview, Rorschach Ink Blot Test
- **Secondary Data**: Books, Journals and Internet

2.8. **Sample**:

- Thirty participants were selected from clinical population of inpatients diagnosed as Mania with psychotic symptoms as per ICD-10 criteria.
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- Thirty participants were selected from clinical population of inpatients diagnosed as Severe Depression with psychotic symptoms as per ICD-10 criteria.
- Thirty participants were selected from clinical population of inpatients diagnosed as Schizophrenia (Undifferentiated type) as per ICD-10 criteria.
- Thirty participants were selected from the normal population.

2.8.1. Inclusion Criteria regarding Age, Education and Gender for All groups:

- All participants pertaining age between 20-35 years.
- All participants are educated at least up to class 10th.
- Male patients.
- Belonging to Middle to Higher Socio Economic Status and preferred Hindu religion followers.

2.8.2. Exclusion criteria for All Group:

- Presence of substance abuse or dependence.(except nicotine and caffeine).
- Familiarity with Rorschach Inkblot Test or Other types of Inkblot Tests.
- History and presence of any other psychiatric disorder.
- History of Chronic, physical illness, organic brain disease.

2.9. Tools used:

2.9.1. General Health Questionnaire (GHQ-Version-12) (Goldberg and Hillier, 1979):
To screen for any psychiatric morbidity in normal controls, GHQ-12 was administrated. GHQ-12 is short version of GHQ. The original GHQ contains 60 items for the detection of non-psychotic or psychiatric illness.

2.9.2. Scio-demographic and Clinical Data Sheet:
It includes socio-demographic variables like age, educational qualification, occupation, marital status, religion, income, residence and clinical variables like type of substance, age of onset, pattern of intake, duration of dependence, family history of substance dependence and treatment history.

2.9.3. Rorschach Inkblot Test: (Rorschach, 1942): The test is developed by Hermann Rorschach in 1921 as Psychodiagnostik. Rorschach test consists of 10 cards, on each of which is one bisymmetrical inkblot. Five are achromatic cards, three cards are chromatic and two cards are semi-chromatic with various shades. The cards are presented to the subject one at a time and in prescribed sequence.

2.9.4. The Rorschach - A Comprehensive System: (Exner, 2002): Interpretation and Scoring will be based on A comprehensive system developed by John Exner. Fourth Edition of Rorschach Comprehensive system will be used.

2.10. Statistics:
Mean, Standard Deviation, T test and One Way Analysis of Variance has used for statistical analysis.
2.11. Procedure:

Admitted patients fulfilling the above mentioned inclusion and exclusion criteria included for the study. The study was conducted at Neuro-Psychiatry Clinic, Surendrangar (Gujarat) India. Rapport established with the patients as well as individuals with healthy controls. Written informed consent was taken from them and Socio-demographic and Clinical Data Sheet did fill up. GHQ was applied on Normal controls. Rorschach Inkblot test was applied in patients with schizophrenia as well as Mania with psychotic symptoms and severe depression with psychotic symptoms. Clinical sitting position was applied in silent environment with the patients. The test was started with instruction to each participant. The test begun by the person’s the first card and asking: what might this be? There are two phase of test: first stage: Response stage, in which the person is giving responses to the blots. Questions and Encouragement, Prompting etc. technique was applied in this phase if needed. The second phase is Inquiry phase, in which the individual was understood why the Inquiry is being conducted and what is expected. The standard explanation to introduce the Inquiry is: ‘Now we are going to back through the cards again. It won’t take very long. I want to see the things that you said you saw and make sure that I see them like you do. We'll do them one at a time. I'll read what you said and then I want you to show me where it is in the blot and then tell me what there is there that makes it look like that to you, so that I can see it
too, just like you did. Is that clear?’ After getting a response from each individual, calculation was started use of structure summary. After finishing the data collection process, Mean, SD of Age, Socio Economic Status, Education etc. variables of all four groups were calculated. One Way Analysis Of Variation (ANOVA) calculated to compare Age of all groups. T test, Mean and SD were calculated to compare mean of five cognitive mediation cluster (XA%,WDA%,X+%,Xu%,X-% and P(Popular)). Patients with Mania with Psychotic Symptoms’ cognitive mediation cluster (XA%,WDA%,X+%,Xu%,X-% and P(Popular)) compared with the Normal healthy subjects’ cognitive mediation cluster. As same way patients with Severe Depression with Psychotic Symptoms and Undifferentiated Schizophrenia, both groups’ cognitive mediation cluster compared with the Normal healthy subjects’ cognitive mediation cluster. As well as Mania and Depression participants, Mania and Schizophrenia, Depression and Schizophrenia participants were calculated regarding cognitive mediation cluster (XA%,WDA%,X+%,Xu%,X-% and P(Popular)). One way analysis of Variation (ANOVA) was applied to compare each variable among four groups Mania, Depression, Schizophrenia and Normal. After calculating data by using SPSS 12, hypotheses were tested, result were discussed and summary, conclusion were made on the base of calculated data.