Chapter - 3

Method

Sample * Tools-EPI, MMPI, Life Events Checklist, Personal Data Sheet *

Procedure * Statistical Analysis.
METHOD

Sample

A survey was conducted in order to assess the availability of sample. The hospitals selected for conducting the survey were Govt. Ayurveda College, Panchakarma hospital and Medical College hospital. All the three hospitals were from Thiruvananthapuram. The findings of the survey revealed that Govt. Ayurveda College and Panchakarma Ayurveda hospitals had inpatient units for treating RA patients while Medical College hospital was devoid of this facility. Moreover, the systems of medicine and the treatment methods were different in Medical College hospital while the other two hospitals followed similar system of medicine. Hence, in order to maintain homogeneity among the sample the patients were selected only from Ayurveda College hospital and Panchakarma hospital located at Thiruvananthapuram, the capital city of Kerala State.

Sample for the study was selected on the basis of the diagnosis made by the doctors of the two Ayurveda hospitals. A total number of 119 patients were admitted in the two hospitals during the study period of one and half years. Out of the 119 patients 101 patients agreed to co-operate with the investigator for the study. The final
sample thus consisted of 39 male and 62 female RA patients from both the hospitals. The age of the patients ranged from 20 years to 65 years.

A control group of 86 normal subjects were selected from the general population for the sake of comparison. Individuals who reported themselves to be healthy and who did not report any serious physical illnesses were included in the control groups. The mean age of RA patients is 40 with age ranging from 20 to 65 and mean age of normal subjects is 39 with age ranging from 21 to 59. Age-wise distribution of the sample is presented in table 3.1.

<table>
<thead>
<tr>
<th>Groups</th>
<th>No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Below 30 years of age</td>
<td>27</td>
</tr>
<tr>
<td>Between 31-40 years</td>
<td>22</td>
</tr>
<tr>
<td>Between 41-50 years</td>
<td>34</td>
</tr>
<tr>
<td>51 and above</td>
<td>18</td>
</tr>
<tr>
<td>Total</td>
<td>101</td>
</tr>
</tbody>
</table>
From table 1.1 it can be seen that the largest number of RA patients belongs to the age range of 41 and 50, and the least number of patients in the age range of 51 and above.

**Tools**

Following tools were used to collect the necessary data for the study:

1. Eysenck Personality Inventory (EPI)
2. Mathew Maladjustment Inventory (MMI)
3. Life event - check list
4. Personal data sheet

1. **Eysenck Personality Inventory (EPI):** Malayalam version adapted from original Eysenck Personality Inventory by Sreedevi Ammal (1977) was used for the study. The EPI measures personality in terms of two independent dimensions viz, extraversion - introversion, and neuroticism - stability. Scoring was done in such a way that high scores in Extraversion indicates extraversion and high scores in Neuroticism indicates neuroticism. Eysenck's theory proposes that these measures are biologically determined behavioral traits. Extraverts tend to be out going,
impulsive, not inhibited, having many social contacts and frequently taking part in group activities. The neuroticism dimension denotes the person’s emotional responsiveness to various situations.

**Reliability:** The parallel form reliability reported that reliability coefficients of neuroticism scale is 0.72 for male and 0.75 for female and for extraversion scale the reliability coefficients are 0.62 for male and 0.61 for females.

**Validity:** Validity coefficients of the inventory reported valid scores against certain sub scales of Mathew Temperament scale. The validity coefficient scale for extraversion calculated against Gregariousness scale is 0.3 for male and 0.7 for females. The validity coefficient for neuroticism calculated against maladjustment is 0.6 for males and 0.7 for females.

2. **Mathew Maladjustment Inventory (MMI):** MMI was originally constructed by Mathew (1975). The inventory measures five major aspects of Maladjustment and also gives an index of general maladjustment. The test is applicable to anybody above 15 years of age. The scale has 100 questions. The answers are forced choice ‘yes’ ‘no’ ‘don’t know’ type. The sub scales are Anxiety, Depression, Mania, Inferiority, Paranoia, and Total Maladjustment (Score, which is the sum total of all measures of sub scales).
Reliability: The split half reliability was assessed among 50 men and 50 women showing good reliability across all six measures. Anxiety, the correlation coefficient is 0.84 for males and 0.79 for females, Depression, 0.63 for males and 0.72 for females, Mania 0.57 for males and 0.80 for females, Inferiority 0.60 for males and 0.78 for females, Paranoia 0.59 for males and 0.75 for females, and Maladjustment score 0.88 for males and 0.93 for females.

Validity: Since the test measures some what comprehensively different types of maladjustment, the test can be said to possess a high degree of content validity. A selection of 30 item from this test, forming a scale of maladjustment in the Mathew Temperament Scale has correlation of 0.68 with neuroticism scale of a malayalam adaptation of EPI.

3. The life Events Check List: A life events check list was constructed by the investigator for assessing the life events of Rheumatoid Arthritic patients as well as normal subjects. This is a 114 item scale which serves as a check-list to assess the number of life events and related stress. The subjects had to indicate the number of stressful life events in their life and its perceived stress in a five point scale ranging from 0 to 4. The items were selected after careful and intense reviewing of literature in the area of stress and
life events. 120 items were selected which were included in the initial check list form. This initial check list was distributed among 5 experts. Later they were collected back along with their written opinion. The final check list consisted of 114 items which were agreed upon by all the experts. The items were classified into eight categories-they are stress in job settings, stress during education period of the individual, stress in marital life, stress in family life, stress arising out of health problems of family members, friends, and themselves, bereavement, stress due to financial difficulties, and stress due to legal matters. The items were printed in a separate book let along with instructions to subjects. Subjects are to indicate those items which they think are applicable to them and its perceived stress in five point scale, 0 to 4.

**Scoring:** All those items indicated by the subjects as stressful ie. Stress score one or above are counted. This is the number of stressful life events of the subject. The sum of stress scores of all the stressful items is the stress score of the subject.

**4. Personal Data Sheet:** A personal data sheet, prepared by the investigator was used to collect demographic variables such as Age, Sex, Religion, Job, Financial status, Educational status, and Marital status of the subjects under study.
Procedure

The investigator met the hospital authorities for permission to collect the data. The need and significance of the study was explained to them. The doctors treating Arthritic patients were consulted and their help was sought in the selection of the sample. Thus the sample for the final study included all patients diagnosed by doctors as suffering from RA. Most of the patients selected for the study were bed ridden. The investigator met the patients at their bed side. The purpose of the study was explained to them and consent requested. After getting the consent tools, were administered to the patients individually.

As most of the patients had difficulties in holding paper or pen, difficulties in sitting comfortably, bending etc., the investigator himself read out the statements in the questionnaire and their answers were noted down. The completed answer sheets in all respects were then scored and entered in the coding sheets.
Statistical Analysis

't' test was done in order to find out whether there would be significant difference between RA patients and normal subjects in the scores of Extraversion, Neuroticism, Anxiety, Depression, Mania, Inferiority, Paranoia, Maladjustment, Life events stress.

Chi-square test was applied to find out whether there would be any significant difference between RA patients and normal subjects in the Number of life events reported by them.

Chi-square test was applied to find out whether there would be any significant difference among four age groups of RA patients in the Number of stressful Life events reported by them.

Chi-square test was applied to find out whether there would be any significant difference between male and female RA patients in Number of stressful Life events reported by them.

One way analysis of variance was done to find out whether there would be any significant difference among the RA patients belonging to the four different age groups in the selected Personality variables under study.

Pearson’s Correlation coefficient was done to find out whether there would be any significant relationship between Duration of illness and the selected Personality variables and Life events stress.