Chapter-III

Research Methods
In the present chapter, the population, the sample, research design and procedures of the study have been discussed with regard to the following heads-

(a) The Population
(b) The Sample
(c) Design and Variable Involved
(d) The Tools Used
(e) The Data Collection
(f) The Statistical Technique Used

(a) **The Population**

The population of the present study consisted of all the undergraduate students belonging to the age group 17-21 years of Jhansi District of Uttar Pradesh.

(b) **The Sample**

In the present study 150 male (75 single parents & 75 double parents) and 150 Female (75 single parents & 75 double parents) of undergraduate classes were included as sample through random sampling technique. The students were selected in the age range of 17-21 years of District Jhansi of Uttar Pradesh.

A Schematic breakup of the sample is shown below-

Total 300 Students
In the present study, single parents mean either mother father is living with subject. The double parents mean mother and father both are living with subject.

(C) Design and Variables Involved

The present study is concern with the effect of gender (male & female) and types of parents (single & double) on self-concept, mental health and social motives of undergraduate students. Thus an ex-post-facto research is considered suitable for the present study. There are two types of variables in the present study-

Independent Variables :

- Gender (Male & Female)
- Types of Parents (Single & Double)

Dependent Variables :

- Self-concept
- Mental Health
- Social Motives

(d) The tools used

The following tools were used in the present study-

1. Self-Concept Scale
2. Mithila Mental Health Status Inventory

By Dr. Anand Kumar & Dr. Giridhar P. Thakur

3. Social Motive Scale

By Dr. R.N. Singh & Dr. Jagdish Pandey

A detailed description of the tools used in the present study has been given below-

1. Self-Concept Scale

The check-list consists of 212 adjectives which cover almost all the important aspects of personality. Most of these are divided into positive and negative words, the classification being based on 80% agreement amongst the 25 judges specially appointed for this purpose. The judges were people with long experience in the field of psychology and education. Words not showing 80% agreement or characterised as neither positive nor negative are classified as neutral words. The positive or the negative aspect was considered from the personal as well as social point of view by the judges. The words are also divided into the different dimensions according to the connotation of the attribute and these dimensions are intellectual, Emotional, Character, Social and Aesthetic characteristics. The check list can measure all the aspects, perceived, ideal, real and social self, of the
individual and under each, the scores are obtained for each dimension in positive and negative classes.

In developing the rating scale, it was thought unnecessary to include antonyms since the extremes on a scale for one characteristic would cover both the positive and negative aspects of the same. The check list was therefore shortened to 90 words by eliminating the opposite words and also some other words which did not evoke much of a response from the subjects. This Rating scale is on a 5-point scale; the five points being, very much like this, much like this, uncertain, not much like this and not at all like this. The 90 words in the check list also are divided in the positive and negative and neutral classes as well as in the dimensions of intellectual, Emotions, Character, Social and Aesthetic Characteristics based on the consensus of the 25 Judges. The rating scale can measure all the four aspects of the self-concept, the perceived, ideal, real and social on all the dimensions for both positive and negative classes.

Instructions printed on the list should be read out or explained verbally by the tester so that the subjects do not hesitate to give their honest and frank response in the correct manner. After the directions are fully explained, the subjects should be given a chance to ask any questions for the clarification of their doubts and queries. It should be made sure that the subjects understand clearly what they are expected to do to give correct
responses. Copies of SCL should be distributed to all of them. If the data are required for group comparison, the subjects need not write the names which will bring out more frank and honest responses from the individuals. Otherwise, the subjects may be asked first to write down all the particulars. Then the tester should read the instructions which are printed on the SCL. After reading out the instructions, the tester should make sure that everyone has followed the instructions clearly and knows exactly how he is asked to give responses. Also he should ascertain that all the particulars are filled. Then the tester may ask the subjects to “Now turn the card and go ahead” There is no time limit for SCL but usually subjects take about 15-20 minutes for filling up the list for one aspect.

After everyone has completed marking the responses the cards may be collected by the tester.

**Scoring**

Scoring of SCL is quick through the use of stencil hand scoring keys. There are separate transparent keys for positive and negative scores as well as for neutral words. Keys are also available for the different dimensions.

For the check list, a positive word marked carries a weight of +1, and a negative word marked a weight of -1. Each aspect is scored separately. For one aspect, the total positive score will be the sum of all
the positive weights given to the positive words. Similarly the negative words marked when totalled will yield the total negative score. The total positive score plus the total negative score gives the composite score for that aspect for that individual. Other aspects can be scored in a similar way. The neutral words are not given any weightage and are to be ignored in the scoring.

For the rating scale, the weightages for positive words for the five points of very much like, also the weightage is the same way. The composite score is obtained by subtracting the total negative score from the total positive score., The neutral words are to be ignored in the scoring. If dimensionwise analysis is aimed at, only the word belonging to that particular dimension are considered and the positive and negative scores for the dimension are obtained in the manner explained above. Similarly, negative and composite scores for all the dimensions can be calculated. This can be done for each aspect separately for comparison.

Discrepancies between different aspects can be worked out by subtracting. The total composite score for one aspect (say perceived) from the total composite score for another aspect (say ideal). This will give the score for self-acceptance. Similarly, discrepancies between other aspects can be calculated. Dimensionwise discrepancies can be similarly
calculated. Other methods of calculating discrepancies are also applicable in the case of SCL.

Consistency scores and discrepancy scores over a period of time may be obtained by administering the SCL after particular time intervals. For this purpose, two response cards on two occasions can be compared. If a word is marked by a person on both the occasions, one score for consistency is given. The total of such scores will give the total consistency score for the discrepancy score. The total of all such scores gives the total discrepancy score for the individual. The difference between the composite scores on the two occasions gives the total Difference Score for the individual.

**Reliability**

Reliability was estimated by test re-test method. For the 15 day's interval, the reliability co-efficient came out to be 89 (N=595). Taking different time intervals from 15 days to 3 months, the co-efficients of correlation ranged from 0.62 to 0.86 (N ranging from 65 to 70). The correlations between consistency scores ranged from .84 to .98. These values indicate a high degree of consistency. It did not reveal any marked difference in the self-concepts of individual over these periods. This proves that the SCL gives a stable and reliable measure of self-concept.

**Validity**
The convergent and discriminant validity was found over for this SCL (PWL) besides establishing the content validity, because the other usual methods of finding out validity did not suit the nature of this tool. For obtaining the convergent validity, another tool SCL (Self-Concept List) which had also been standardised was utilized. The convergent correlations between the same dimension in all cases are higher than the discriminant correlation, thus proving the validity of the instrument.

Similar results were obtained for ideal self and Social Self scores also proving the convergent and discriminant validity of the instrument.

2. Mithila Mental Health Status Inventory (MMHSI):

Original test in English (Thakur, 1984) had five scales viz, Egocentrism, Alienation, Expression, Emotional Unstability and Social Non-conformity. These five scales were considered cardinal one for estimating mental health status of people. Alienation, egocentrism and social non-conformity scales were included to assess psychiatric and social problems, expression and emotional unstability were put to ascertain personality disturbances. Selection of the scales was made after a careful review of the relevant literature on the subject and discussions with experts of clinical psychology. Items of the selected scales were made more
meaningful specially in the Indian context. These five scales, therefore, covered important areas of mental health status of people.

200 items (40 items for each scale) were constructed for the five scales of the inventory following suggested precautions in the English language. Approximately half of the items of each scale were positively worded and remaining half of the each scale were negatively worded. Six judges were asked to rate face validity of the items. The judges were professional clinical psychologists and university teachers of clinical psychology with specialization in personality assessment. They were asked to rate each item on a five point response format on each scale of the inventory. The response format was “irrelevant”, “slightly associated”, “moderately associated”, “considerably associated” and “greatly associated”. As a result of scrutiny, 76 such items were dropped which had a mean rating of below 3.00. Remaining 124 items were selected for preliminary try out of which 28, 23, 26, 24 and 23 items belonged to egocentrism, alienation, expression, emotional instability and social non-conformity areas respectively.

For Hindi adaptation of the MMHSI, the inventory was taken in its original English form and given to ten Indian psychologists knowledgeable in both English and Hindi language for translation into Hindi language, yielding. 10 Hindi versions of the inventory. All 10
versions with an English copy were given to 5 experts knowledgeable in both Hindi and English well who selected the final translations as the most accuarted equivalent.

**Reliability :** Hindi version of MMHSI was administered on a randomly selected sample of 400 persons (200 males and 200 females). The age range of the subjects was from 18 years to 55 years with a mean age of 42.38 yr. In order to obtain test re-test reliability, it was readministered to the same groups after an interval of 3 weeks. However only 286 subjects were available for the purpose,

It may be evident from Table that MMHSI scales had high reliability co-effecients both by the split-half and test re-test methods.

**Reliability Co-efficient for the MMHSI Scales :**

<table>
<thead>
<tr>
<th>Coefficient</th>
<th>N</th>
<th>Eg</th>
<th>Al</th>
<th>Ex</th>
<th>Eu</th>
<th>Sn</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal Consistency</td>
<td>400</td>
<td>0.88</td>
<td>0.74</td>
<td>0.78</td>
<td>0.83</td>
<td>0.76</td>
</tr>
<tr>
<td>Test re-test</td>
<td>286</td>
<td>0.78</td>
<td>0.73</td>
<td>0.79</td>
<td>0.85</td>
<td>0.89</td>
</tr>
</tbody>
</table>

Reliability co-efficients of the MMHSI scales ranged from .74 to .88 with reference to internal consistency and .73 to .89 intest re-test stability.
### Table

**Reliability of MMHSI:**

<table>
<thead>
<tr>
<th>Method</th>
<th>N</th>
<th>r</th>
<th>Index of Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Split-half</td>
<td>400</td>
<td>.81</td>
<td>.90</td>
</tr>
<tr>
<td>Test re-test</td>
<td>286</td>
<td>.76</td>
<td>.87</td>
</tr>
</tbody>
</table>

It would be evident from Table that reliability of MMHSI is high both by split-half and test-retest methods.

### Validity

Hindi version of MMHSI was administered on sample of 130 males and females of psychiatric out patient clinics and obtained mean scores were compared with a normal incidental sample of 130 male and female students of the same population. The ages of the subjects ranged from 25 years to 45 years with a mean age of 36.43 year.

MMHSI is a self-administering inventory and can be administered individually or in groups. The instructions given on the test form are sufficient to take care of the statements that are given. Individual and oral administration, however, are effective for non-readers, for visually impaired, and for other handicapped clients who cannot respond to stimulus items without help. They should have the items read aloud to them individually, and the examiner should record responses in the appropriate space on the answer sheet.
Written or oral administration of MMHSI generally takes from 20 to 30 minutes. However, no time should be given for the test.

When subjects are working independently they should be instructed to read and follow directions printed on the form. When the examiner is reading and recording the subject’s responses, the examiner should read the directions to the examinee, and again-ask if there are any questions about what is to be done.

**Scoring and Interpretation**

Scores for MMHSI are derived from the responses on each item obtained on a five point response format “very true”, “true”, “doubtful”, “false”, and “completely false”. The positively worded items of the inventory are given scores of 5, 4, 3, 2 and 1 for “very true”, “true”, “doubtful false” and “completely false” responses. Negatively worded items are scored in the reverse manner.

<table>
<thead>
<tr>
<th>Score for positively worded items</th>
<th>Score for negatively worded items</th>
</tr>
</thead>
<tbody>
<tr>
<td>very True = 5</td>
<td>Very True = 1</td>
</tr>
<tr>
<td>True = 4</td>
<td>True = 2</td>
</tr>
<tr>
<td>Doubtful = 3</td>
<td>Doubtful = 3</td>
</tr>
</tbody>
</table>
The maximum possible score for MMHSI is 250 and minimum being 50. High score on MMHSI is indicative of poor mental health. In addition to the total score one may want to compute separate scores for each of the scale of MMHSI. The maximum possible score, therefore, on each is 50 and minimum 10. Analysis of each scale tends to provide additional information which may not readily be revealed in section of the total score only.

Egocentrism scale measures the extent to which the individual is concerned about his own need, feelings, opinions and ideas. People scoring high on this scale would have difficulty in identifying or sympathizing with other people. High score on this scale is also indicative of withdrawal tendency which results in difficulties in maintaining interpersonal relationships.

Alienations scale was developed to indicate the similarity of the respondent to hospitalized psychiatric cases. Persons scoring high on this scale would be suspicious, oversensitive, getting unusual sensations and sensory distortions.
Expression scale would measure the level of interaction of individuals on a social level. High score on this scale would indicate inconsistency of relationships in social situations, lack of social disclosure and feeling of insecurity.

Emotional unstability scale will indicate whether the person would be unhappy, nervous, emotionally labile, fearful, anxious and depressed. High score on this scale would indicate that the individual has serious personality problems and would need psychological and psychiatric assistance. Such people would have definite adjustment problems.

Social non-conformity scale would provide a clue to whether the individual was aligning with the existing social system or against it. A high score on this scale will indicate people to be narcistic. Such people would like to cut them off from effective participation in ordinary social situation.

High score on MMHSI is indicative of poor mental health. The degree of psychological assistance required in a particular case may be determined on the basis of the departure trend of the mean values on each scale. The exact nature and extent of the problem may be ascertained through an intensive enquiry.

3. Social Motives Scale
The strength of social motives (Need may easily be measured with this scale which measures four social motives, viz., Achievement (N. ach), Power (N. Pow) Affiliation (N. aff.) and Approval (N. app.). The purpose of this scale is to provide a brief about useful behavioral measure of the above social motives. For this purpose, initially 25 positive and 7 negative items were written and were placed before learned teachers, as judges, for their opinion regarding the appropriate of the items. The items receiving 90 % agreement or above were retained and the items with lower agreement percentages were removed from the set. This procedure reduced the number of items to 27. These items were administered on 800 college students.

The item analysis procedure reduced the number of items to 20 (5 for each motive) as the correlation of coefficients obtained for the items were not significant. These items were consequently rejected. The final form of the scale consists of 20 items. It provides scores for the motives (or needs) of achievement, power, affiliation and approval.

**Administration:**

The social needs scale can be administered individually or in a group situation. The respondent can express his or her degree of disagreement or agreement by selecting any one of the five alternative response categories, i.e. completely disagree, disagree, undecided, agree
and completely agree. This scale contains two negative and 18 positive items. The items 3 and 11 are negative and the rest are positive items. Each scale contains five items.

**Scoring:**

The scoring procedure is very simple. The positively worded items are scored as 1, 2, 3, 4 and 5 for response categories ranging from completely disagree to completely agree respectively. But in the case of reverse (negative) items, scoring system is reversed i.e. a score of 5 is awarded for completely agree category. Higher scores on the scales indicate greater strength or dominance of the social motives. Separate scoring stencils on tracing paper may be prepared to make the scoring work even much easier. The sum of scores on each scale will be between 5 and 25 pints. The highest score tells the dominant need.

**Norms:**

Norms are based on large samples of various types. These descriptive statistics can be used to interpret the data obtained for an individual or group of individuals. Bar diagrams may also be drawn to compare the strength of needs in an individual. High score indicates great strength of the motive and vice-versa. The dominance of the needs in an individual or group may be determined on the basis of the departure trend of his/her score.
Reliability and Validity:

Test-retest method was employed to determine the reliability of the social motives scale. The scale was again administered to the same sample of the students, who participated in the first phase of testing. Only 740 respondents could be available in the second phase. Thus the test-retest reliability coefficients were found to be .76, .80, .69 and .75 respectively for the four scales. These coefficients are fairly high.

To ensure that the social motives scale measures the needs as supposed, scores of the respondents on it were correlated with their scores on similar scales like those of the Crown and Marlow (1960) for approval need, and Steers and Braunstein’s (1976) scales for other scales. This technique yielded correlation coefficients of .76, .82, .75 and .71 for the four scales respectively. These coefficients are also fairly high, indicating the validity of the social needs scale.

(e) The Data Collection

The subjects of the present study were selected from the prescribed population. The principals of these Institutions were approached one by one and the objectives of the present study were explained. All the institution provided the facilities for collection of data. The selected students were administered three tests and requested to answer the
questions (items) sincerely and truthfully. They were assured that the responses were kept confidential.

(f) The Statistical Technique Used

The first purpose of the present study was to compare the self-concept, mental health & social motives of male & female and single & double parents, for this purpose Mean and Standard Deviation of each group were calculated. The Comparison between different groups were made on the basis of Critical Ratio with 0.05 and 0.01 level of confidence considered significant. The hypothesis from 1 to 6 were tested by applying Critical Ratio.

Another purpose of the present study was to find out the effect of gender (male & female) and types of parents (single & double) on self-concept, mental health and social motives, for this purpose analysis of variance was calculated.