CHAPTER - III

METHOD AND PROCEDURE
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The method and procedure of the study have been discussed with regard of the following data.

(a) Population
(b) The sample
(c) Research Design and Variable Involved
(d) The Tools used
(e) Procedure
(f) The Statistical Technique used.

(a) Population:

The present study was confided the personality mental health & self-esteem among different nutritional status children of Bundelkhand area of Uttar Pradesh. There are:

1) Jalaun
2) Banda
3) Hamirpur
4) Lalitpur
5) Jhansi
6) Mahoba
7) Chitrakut dham (Karvi)

But I have taken only one district Jalaun as per the study.
(b) **The Sample:**

In the present study 300 children 8-13 years of age (boys and girls) of selected through their children ideal height & weight difference and though purposive sampling.

The subject were selected as a distributing technique 100 each in rich nutritional status children 100 medium nutritional status children and 100 poor nutritional status children and than further were divided for about 50 each in boys and girls group of both rich, medium & poor nutritional status children.

```
300

100
Rich nutritional status children

100
Medium nutritional status children

100
Poor nutritional status children

50  50
Boys  Girls

50  50
Boys  Girls

50  50
Boys  Girls
```

(c) **Research Design and Variable Involved:**

The present study is concerned with the effect of gender (boys & girls) and types of nutritional children (rich, medium & poor). 2x3 factorial design is considered suitable with the present study.
The variable of the present study are as follows -

**Independent Variable** -

"Independent variable is a condition in a scientific study that is manipulated so that its effects may be observed -

- Rathus

"An Independent variable is that factor manipulated by the experimenter in his attempt to ascertain its relationship on the observed phenomenon" - Townsend

"The variable over which the investigator has control are called independent variable". - Edwards

"In general, then an independent variable is any variable manipulated by experimenter, either directly or through selection order to determine its effects on a behavioural measure (dependent variable)". - D. Amato

**Dependent Variable** -

" A dependent variable is that factor which appear, disappears, or varies as the experimenter introduces removes as varies the independent variable" - Townsend

Any measured behavioural variable of interest in a psychological investigation in called a dependent variable

- D. Amato.
There are two types of variable involved in the study.

1. Independent variable - Gender (boys & girls)
   - Types of nutritional children
     (Rich, Medium & Poor)

2. Dependent Variable - Personality
   - Mental Health
   - Self-esteem

(d) **The tools to be used:**

1) Indian adaptation of children personality questionnaire
   - S.D. Kapoor & S. Rao

2) Mental Health Scale - Taresh Bhatia & S.C. Sharma

3) Self-esteem - Mr.G.P. Thakur & M.S. Prasad

1) **Indian adaptation of children personality questionnaire:**

CPQ measures a set of fourteen factorially independent dimensions of personality has already been stated. What is now necessary is that the psychologist get a thorough grasp of their nature, and appreciate more precisely the research foundations on which they stand.
The Nature of Source Traits:

In the first place, these dimensions or source traits, as they are properly called (Cattell, 1950, 1957c; French, 1953) are identified and referred to by letters of the alphabet, A through Q4. They thus maintain the same designations as have been traditionally used in the 16 PF (Cattell, Eber & Tatsuoka, 1970), HSPQ (Cattell & Cattell, 1969), and rating studies and standardized in literally scores of published psychological researches and textbooks (see bibliography of Cattell, 1950, 1957c). In addition to symbols, they have technical names, which give the most accurate meaning to them in the light of present psychological knowledge (Cattell, 1950, 1956, 1957c; French, 1953). Technical names are important for continuity with the research literature and theoretical developments. For example, Factor C is ego strength, Factor B is Spearman's "g" or general intelligence, Factor E is dominance versus submissiveness, and Factor G is superego strength. Some of these technical names are familiar, because they stem from older clinical or psychometric notions, but others are new, e.g., premisia, threctia, because factor analysis as an instrument has revealed, as the microscope did in biology or the spectrooscope in astronomy, patterns not previously known to the unaided eye. New, precise concepts
need new technical terms, and the psychologist will find in the long run that learning the technical terms will lead to better understanding and more reliable communication with other psychologists.

The full factor-by-factor listing and description of each of the fourteen dimensions is given below in Section 7. The psychologist or teacher who is to make the best use of the test will do well in due course to turn thereto to familiarize himself thoroughly with the meaning of the basic source traits. For if he is to command the maximum insight into the various predictions and diagnoses which he may make from the scores, knowledge of the psychology of the factors is a vital addition to purely statistical treatment. More thorough, extended, technical treatment of these dimensions are available elsewhere (Bischof, 1970; Cattell, 1957c, 1965b; Dreger & Cattell, in press; Eysenck, 1953; Pervin 1970; but especially in Cattell, 1957c). Although research is still proceeding to bring out the meanings and general psychological implications of these dimensions more fully, and to add further dimensions, research checks have recognized their existence as independent factors, i.e. as empirical patterns and experimentally replicable dimensions of personality which deserve separate scores. Research is also
proceeding on correlations with various life criteria, but here, also, enough have been explored (Section 9, below) to show that substantial concrete predictions can be made.

**Titles and Symbols for the Factors:**

At this point, therefore, possible future interpretations may be left to research, and we shall simply list the letter symbols and names of the fourteen dimensions in Table. The reader may be content for the present with this much description and so proceed to familiarize himself with the structure of the test itself, as described in Sections 3 and 4. Alternatively, he may find it useful to jump ahead for a while to the fuller discussion in Section 7.

**Primary Source Traits Measured by the CPQ**

<table>
<thead>
<tr>
<th>Low Score Description</th>
<th>Factor</th>
<th>High Score Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reserved</td>
<td>A</td>
<td>Warmhearted</td>
</tr>
<tr>
<td>Dull</td>
<td>B</td>
<td>Bright</td>
</tr>
<tr>
<td>Affected by Feelings</td>
<td>C</td>
<td>Emotionally Stable</td>
</tr>
<tr>
<td>Phlegmatic</td>
<td>D</td>
<td>Excitable</td>
</tr>
<tr>
<td>Obedient</td>
<td>E</td>
<td>Dominant</td>
</tr>
<tr>
<td>Sober</td>
<td>F</td>
<td>Enthusiastic</td>
</tr>
<tr>
<td>Expedient</td>
<td>G</td>
<td>Conscientious</td>
</tr>
</tbody>
</table>

(97)
Shy H Venturesome
Tough-Minded I Tender-Minded
Zestful J Circumspect Individualism
Forthright N Shrewd
Self-Assured O Guilt-Prone
Undisciplined Self-Conflict Q₃ Controlled
Relaxed Q₄ Tense

Directions for Scoring:

The CPQ test is set up to permit either machine scoring of the separate answer sheet or hand scoring. In the latter case, separate stencils are available for scoring the answer sheet or the test booklet, if a separate answer sheet has not been used.

Regardless of which method of scoring is selected, the following general guidelines apply: (a) examine the answer forms (sheets or booklets) to see that only one response has been marked for each item and that it is clearly marked; (b) reject any forms that show obvious response patterns such as all of the answers in one column, regular alternation of left and right responses, etc; and (c) check to see that all of the items have been answered.
When scoring answer forms that are incomplete, the test administrator has two choices, (a) having the child who took the test supply the missing information or, if this is not possible, (b) estimate full test scores from the portion of the test that is completed. This can be done by obtaining the score for the completed items in any scale, multiplying that score by the number of items in that scale (10), and dividing by the number of items actually completed for that scale.

Complete instructions for obtaining the raw scores from the answer forms are given on the scoring stencils themselves. Two stencils are required to obtain the 14 scores from each of the test forms.

**Test Reliability or Consistency:**

Ordinarily, one of the first things we need to know about a test score if how consistent it is likely to be. That is, does the score change much over time? How comparable are scores from different forms of the test?

In the next three tables, we report three approaches to evaluating the reliability of the CPQ scales. Again we remind the examiner that precise personality assessment at this age level requires time. Two forms of the test should routinely be given if precise individual assessments must be made.
Table reports one-week test-retest, coefficients for the CPQ scales. This is probably the most important aspect of test reliability for most people since it indicates how long the test information is likely to be useful. Scores which change dramatically in a few hours may not be very useful in predicting academic achievement, though they can still be quite useful in research or in explaining behaviour at one point in time.

Over a reasonable period of time, as Table shows the CPQ scales show good reliability. We have no long term test-retest studies to report at the present time though it should be recognized that over long time periods changes in test scores represent real age and developmental changes as well as measurement error. Such coefficients probably tell more about the stability of the trait than about the construction of the test.

Table: CPQ Test-Reetest Coefficients after a One-week Interval

<table>
<thead>
<tr>
<th>Personality Factors</th>
<th>Form</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>I</th>
<th>J</th>
<th>N</th>
<th>O</th>
<th>Q₃</th>
<th>Q₄</th>
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<tbody>
<tr>
<td>A+B</td>
<td>67</td>
<td>87</td>
<td>78</td>
<td>81</td>
<td>72</td>
<td>72</td>
<td>78</td>
<td>57</td>
<td>70</td>
<td>70</td>
<td>69</td>
<td>46</td>
<td>80</td>
<td>61</td>
<td></td>
</tr>
<tr>
<td>C+D</td>
<td>79</td>
<td>84</td>
<td>81</td>
<td>72</td>
<td>84</td>
<td>78</td>
<td>82</td>
<td>66</td>
<td>75</td>
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<td>A</td>
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<td>60</td>
<td>58</td>
<td>57</td>
<td>37</td>
<td>63</td>
<td>47</td>
<td></td>
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<tr>
<td>B</td>
<td>70</td>
<td>82</td>
<td>72</td>
<td>66</td>
<td>64</td>
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<tr>
<td>C</td>
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<td>70</td>
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<td>60</td>
<td>63</td>
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</table>

(100)
Validity:

Many tests are developed with the expressed purpose of predicting some one aspect of behaviour or of measuring a single dimension of personality. The validity of these tests is a measure of the relationship between what the test specifically measures and what it is trying to measure. In technical terms, it is a criterion or concrete validity, meaningful only in regard to the test's limited purpose. The CPQ, and its sister scales for other age ranges, is a multiple-purpose test measuring at the same time many different aspects of personality, and is usefully applied in prediction and measurement across many different situations. Because of this, and because of its recent introduction into applied areas, information on concrete validity will not be presented here.

What is more important, in any case, is the relationship of what a test measure to some hypothesized construct concerning the structure of personality. Many tests are constructed on a strictly empirical foundation, i.e., without the guidance of theory. Their usefulness is extremely limited, for they are applicable only with reference to some one criterion. On the other hand, the CPQ is theoretically based; its scales are relevant to the hypothesized structure of personality, and validity indicates both the goodness of the
hypothesis and the adequacy of the measures of each hypothesized construct. This is termed concept (or "construct") validity (Cattell, 1964; Cronbach, 1960). The process of obtaining these validities is quite complex, arising from factor analytic techniques, and therefore will not be discussed here. However, each coefficient can be regarded as a mean correlation of a particular group of items with the factor that, together, they are supposed to measure. More precisely, this is direct concept validity, and the coefficients for each factor are set out in Table.

**Table : CPQ Direct Validity Coefficients**

<table>
<thead>
<tr>
<th>Form</th>
<th>A</th>
<th>B</th>
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<th>I</th>
<th>J</th>
<th>N</th>
<th>O</th>
<th>Q₃</th>
<th>Q₄</th>
</tr>
</thead>
<tbody>
<tr>
<td>A+B+</td>
<td>54</td>
<td>90</td>
<td>87</td>
<td>80</td>
<td>42</td>
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<td>C+D</td>
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<td>C+D</td>
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<td>45</td>
<td>29</td>
<td>55</td>
<td>20</td>
<td>58</td>
</tr>
</tbody>
</table>

2) Mental Health Scale:

Dr. Taresh Bhatia and Dr. S.C. Sharma developed the present scale for measuring different mental health areas of an individual. The present scale measures five important areas of an individual's mental health. To makes a scientific selection of the areas of mental health, 10 relevant and meaningful areas of
mental health were taken. These 10 areas were given to five experts in the field of psychology, for approval. The total number of areas over which the experts were unanimous was five and they were retained for the final form of the scale. These areas were-

(a) *Realistic (REA)* -

The ability to appraise oneself realistically and to take a realistic approach to situations, the ability to evaluate one's achievements realistically.

(b) *Joyful living (JFL)* -

One of the outstanding characteristics of the person is Joyful living. A happy person is a young, healthy, well-educated, well paid, extroverted, optimistic, worry free, religious, married person with high self-esteem, high job morale, and modest aspirations of either sex and of a middle range of intelligence.

(c) *Autonomy (AUT)* -

Closely related to acceptance of responsibility is autonomy. One who trusts and depends on his own capacities to organize and interpret the data of his experience. He freely steers his own course (Barrett Lennard 1962). In decision-making, he is able to make important decisions with a minimum
of worry, conflict, advice seeking and other types of running-away behavior (Kent 1966).

(d) Emotional Stability (ES) -
Emotional stability indicates an individual, who is with full control over his emotional expression, emotionally mature, stable, possessing ego strength.

(e) Social Maturity (SM) -
The progressive improvement brings in social maturity through directed activity of the individual. In comprehension of the social heritage and the formation of flexible conduct patterns of reasonable conformity with this heritage.

Item Analysis -
It was decided to write 15 to 20 items under each of the five areas. In this way an initial pool of 85 items was ready for the entire scale. The scale was administered to the subject of a sample of 250 students (Male and Female) for the purpose of item-analysis. The age range of the subjects was 15 to 21 years. Employing 27% upper and 27% lower criterion group's item analysis was done. Discriminative values were computed for item selection and applying 't' test for each item. All the statements were then arranged in descending order of their 't' values. Researcher selected the first 50 items with the largest 't' value for the final scale out of which each area had 10 items.
Reliability -

The co-efficient of reliability was determined by test-retest method. The test was administered twice with a time interval of 45 days to a sample of 200 subjects. The test-retest reliability coefficient for each area of the scale was found to range between 0.78 to 0.85.

Validity -

The validity of the scale was established with the help of content validity on the basis of internal consistency.

Administration – It is a self-administrating scale. There is no time limit for answering it. However, most of the groups should finish it in about 15 minutes. It should be emphasized that there is no right or wrong answer to the statement.

Norms -

A qualitative description of the scores obtained on different areas can be interpreted with the help of norm table.

Scoring Key –

It is a five-point scale, the scoring of which has been objectified by assigning five to one scores respectively for five alternatives of the positive items rated strongly agree to strongly disagree. For the negative items the scores assigned to each alternatives have been reversed. They range from one to five for
five alternatives i.e. positive statement assigned from 5 to 1 but negative statement assigned from 1 to 5. Negative statements are 4, 5, 6, 7, 10, 14, 15, 19, 20, 24, 25, 29, 33, 34, 39, 44, 48, 49 in present scale.

3. **Self-esteem inventory:**

This inventory was constructed by M.S. Prasad and G.P. Thakur. It has a seven point rating scale from fully satisfied to fully dissatisfied. This inventory has 30 items of basic self and 30 item of social self of the thirty items, seventeen are socially desirable and thirteen are socially undesirable. The item which are socially desirable would get 7 scores if answered completely true and 1 if answered completely false. Other intermediate answers would get 7 scores and completely true would get 1 score. The reliability of the inventory by split half reliability co-efficients came out be 0.82 and 0.78 for personality perceived self and socially perceived self respectively. Re-test reliability co-efficients were found for both the tests were 0.69 and 0.66 respectively for personality perceived self and socially perceived self and socially perceived self. The highest score for the basic self is 210 and minimum score for the basic self is 30 for the 30 items of the inventory.
(e) Procedure:

In the present study researches took 300 subjects of which 100 rich nutritional status children (50 boys and 50 girls), 100 medium nutritional status children (50 girls & 50 boys) & 100 poor nutritional status children (50 boys & 50 girls).

For the data collection of children (boys & girls) researcher went to different public school to find out the ideal height and weight that children & know about. What type of nutritious they take. If they have good health they take good nutritious food. If they have medium health they take medium nutritions food & If they have poor health means they take poor under nutritious food.

For the data collection of the children we went to different public schools and measure the, height and weight of their children and takes the result of their various test papers (personality, mental health & self-esteem) and we take conclusion about their meals according to performance.

(f) The Statistical Technique used:

The first purpose of the present study was to compare the personality, mental health & self-esteem. Mean and standard deviation of each group were calculated. The comparison between different groups were made on the basis of (107)
critical ratio with 0.05 and 0.01 level of confidence considered significant. Hypothesis were tested by applying critical ratio. Than calculate the effect of gender (Boys & Girls) and types of nutritional children (rich, medium & poor) on personality, mental health and self-esteem and testing the hypothesis.