CHAPTER - IV

MATERIALS, SUBJECTS AND METHODS
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To test the hypothesis that were formulated, four instruments are needed.

1. A test to measure General ability in children
2. Inventory to asses the children personality
3. Stress inventory to identify the sources and intensity of stress in children
4. An instrument to measure childrens coping strategies

Measuring General Ability

The general ability of the children was assessed by Ravens coloured progressive matrices developed by Raven (1958) for children of primary and secondary level respectively. The test were used to measure childrens intelligence because of the reason that the test makes it possible to explore the psychological significance of observed discrepancies between a persons present capacity for productive thinking and his recall of information. Hettema (1988) says that intelligence is the one that operates in the context of daily life condition. Intelligence is conceived as a joint product of cognitive and emotional/motivational process. Since RPM(Ravens Progressive Matrices) aims at assessing a persons observation and thinking it may be found to proximate the above mentioned notion. More over observation and clear thinking of a
person is important for his stress and coping behaviour. The RPM gave a retest reliability of 0.98 on local sample of 60 primary school children, with a time interval of 15 days. For the children of High school level the retest reliability was 0.97 (the sample was 60 with a time interval of 15 days). The instrument was administered individually as per the manual of instructions.

Assessing A Persons's Personality

Personality was assessed by High school personality questionnaire by Cattell (1969). The purpose of obtaining measures of personality was to examine whether there was any relationship between the personality traits and the other variables. The present investigation needed a personality questionnaire that would give a fairly reliable and reasonably complete measure of childrens personality traits. Among the measures of childrens personality traits that are available and have been used to some extent in India was Cattell's Jr. Sr. High School Personality Questionnaire (14.PF). Form A of the 14 P.F is a fairly short inventory which provide factors derived from reliable measures of fourteen factors of the personality. The 14P.F (From A) can be safely considered to be comprehensive in its coverage of basic independent factors of personality. Form A has the advantage of ease of administration and of scoring.
The 14. P.F (from A) has several advantages over many scale tests. There is increasing evidence from the studies using the 14. P.F to show that a total picture of personality using the 14. P.F is a better predictor than what may be obtained from the single scale tests. Also these fourteen personality factors are essentially independent factors and correlations among them are usually negligible. The questionair had a test-retest reliability of 0.91 (N: 60 time interval: 15 days) on a children of a local area.

Assessing Sources and Intensity of Stress

To determine whether children face problems than adults, one need an indepth study of the earlier studies. But the review of earlier studies gave a heuristic value of the concept of stresses and coping for understanding adult reaction to stressor events, its relative absence from the literature of child development research is puzzling (Murphy and Associates, 1962). If the stress and coping paradigm has proven variable in identifying variations between biological psychological and social processes in adults as stress producing, why should these constructs not help in understanding the same reaction in children? An immediate issue
is posed by these question. What are the possible differences between adulthood and childhood? Do these differences necessitate modifications of the stress and coping model before it would be used on children research. The Answer is 'no' as we cannot use the same constructs developed for the Adults on children. The reason is the measurements made of stress and coping in adult research have been physiological behavioural and social. In contrast to adults, children are in the midst of physical, psychological and social growth. As a result, their environments are more varied and changing than are those of adults. Psychological growth and development is fairly rapid, and thus variability of reaction, is characteristic of children as opposed to the comparative stability observed in adults. Thus it is necessary to capture the environmental and internal problems of the children by asking them directly. Keeping the afore said observations in mind in the present investigation an attempt is made to develop a questionnaire to measure the stress in children.

The stress inventory/questionnaire consisted of 60 items. These 60 items fall into Four areas
1. **Physical Area (15 Items)**

   which consists of possible stress producing areas due to changes in the child's physical growth and changes occurring due to this growth such as.

   - Having not attractive Physical appearance.
   - Feeling tired much of the time.
   - Unable to have or wear good cloths.
   - Unable to learn necessary physical skills etc.

2. **Psychological Area (15 Items)**

   Which consists of various psychological problems which may produce some disturbance in child's adjustment such as.

   - Too easily discouraged.
   - I feel depressed.
   - Parents are separated or divorced.
   - Easily distracted from my work etc.

3. **Educational Area (15 Items)**

   Includes various problems faced by the children in their school and its related activities. Such as.

   - I have to work hard to learn anything.
   - Disinterest to participate in co-curricular activities.
   - Unable to seek permission to go out of class or house.
   - Not planning my work ahead.
4. **Social Area (15 Items)**

Which consists of various problems faced by the children in the society such as.

- Not able to develop a whole some attitude toward society.
- Not going to Church/Temple/Mosque.
- My parents are old fashioned in their ideas.
- Difficulty to conform to groups.

The inventory/questionnaire is a list of possible stress producing situations in the above said areas. The child has to read each situation and report their stress experience on a three point scale from Light Moderate to Heavy, by indicating a '✓' mark.

The scoring of the scale is as follows. '1' point is given to the subject marks on light category, '2' points to moderate category and '3' points for heavy category. The maximum possible score is 45 and the minimum possible score is 15 in each area. The total stress score is obtained by adding the score in the four areas. The maximum possible total score is 180 and the minimum score is 60. The subject who obtains score between 60-100 is considered to have low stress. If the subject score between 100-140 considered to be moderate and if a subject get a score between 140-180 considered to have high stress.
Identification of Coping Strategies in Children

When we focus our attention to coping in children there is a lack of research in how children cope in difficult situation. The immaturity of children and dependency on adults for their survival makes them to depend upon others for their coping in children mostly uses social system as a part of, the effort at, adoption and survival. Coping and adoption are not simply physiological or psychological reactions restoring equilibrium, rather they are responses which are embedded within the social matrix. Hence, the successful adoption by the child includes the ability to demand on the immediate social environment which will ensure survival. In case of children the successful coping includes not only psychological but also includes children inherent ability to demand compensating care from the major caregivers. This perspective made the present investigator to adopt the Moos and Billings (1982) coping classification and developed an inventory which consisted of 30 items which can be grouped into three categories of coping strategies.

1. Appraisal focused coping (AFC) (11 items)
2. Problem focused coping (PFC) (8 items)
3. Emotional focused coping (EFC) (11 items)
The items in each of these categories tried to measure the ways in which children in the past have overcome their stressful situations by responding as 'yes', 'undecided' or 'no'.

The scoring of the inventory is as follows. If the subject marks 'yes' it was given '2' marks and if marked as 'undecided' '1' and '0' for 'No' category. The maximum score AFC and EFC was 22 and minimum was 11, the maximum score for PFC was 16 and minimum was 8.

Initially a pilot study was conducted. It was conducted in two phases. In the first phase 60 subjects were given the two inventories and asked to mark their stressfulls situations in the first questionnaire and coping strategies used in the second questionnaire. Then after a gap of a month, these 60 subjects were again given the inventory and were asked the same questions. The responses of the subjects in the first and second phase were compared and it was found that an average difference of 0.4 items for stress questionnaire, and 0.35 items for coping per person only occurred, between the first and second measurement thus giving the instruments good reliability.
Subjects of the Study (Sample)

The subjects of the present investigation were 400. The sample consisted of 400 school going children (Boys and girls) in primary school and high school, age ranging from 10 years to 15 years age. Primary school children age group ranging from 10 years to 12 years, and high school children age group ranging from 13 years to 15 years age of these Boys are 170, and Girls were 230 out of the total of the sample (400).

With in each group 41, subjects are in the 10 years age group, 47 subjects are in the 11 years age group, 101 in the 12 years age group, 92 in the 13 years age group, 73 from the 14 years age group and 46 from the 15 years age group.

The entire sample was drawn through multi-stage random sample technique from the rural (boys 100 and girls 110) and urban (boys 95 and girls 95) areas in Tirupati, Nellore and Cuddapah towns in Andhra Pradesh. In each school the attendance sheet was used as the basis to draw sample of boys and girls. The sample distribution for the present study is given in table.
Table-1: Distribution of the Total Sample

<table>
<thead>
<tr>
<th>Level of School</th>
<th>Age</th>
<th>Gender</th>
<th>Boys</th>
<th>Girls</th>
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</thead>
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<tr>
<td></td>
<td></td>
<td>Rural</td>
<td>Rural</td>
<td>Urban</td>
</tr>
<tr>
<td>Primary School</td>
<td>10 years</td>
<td>11</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>11 years</td>
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<td>17</td>
</tr>
<tr>
<td></td>
<td>12 years</td>
<td>24</td>
<td>27</td>
<td>25</td>
</tr>
<tr>
<td>Secondary School</td>
<td>13 years</td>
<td>20</td>
<td>25</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>14 years</td>
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</tr>
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<td></td>
<td>15 years</td>
<td>10</td>
<td>10</td>
<td>16</td>
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</tbody>
</table>

Procedure of Administration

The subjects were first contacted and appointment was fixed, for following day at outset the purpose of the study was briefly explained to the subjects and their cooperation sought, then they were administered the General ability test (Ravens Colour Progressive Matrices) and Presonality Questionnaire on day one and Stress Inventory and Childrens coping Inventory was administered next day. As a recognetin of their cooperation a few Biscuits and Chocolates were given to them. Twenty five of the sample could not be tested completely. In their place a fresh sample was substituted.