Chapter – IV

Procedure and Design of the Study
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PROCEDURE AND DESIGN OF THE STUDY

In the light of the theoretical framework discussed earlier in Chapter II and also on the basis of the survey of research studies (Chapter III), the investigator drew certain specific objectives which led to the present investigation. The objectives of the study, the hypotheses concerning those objectives, the design and procedure of the study are mentioned here in this chapter.

4.1 OBJECTIVES OF THE STUDY

To conduct the study scientifically the following objectives have been framed:

1. To study the difference between high and low groups on intelligence in terms of the development of moral reasoning.
2. To study the difference between extrovert and introvert groups of children in terms of the development of moral reasoning.
3. To study the difference between high and low groups on neuroticism in terms of the development of moral reasoning.
4. To study the difference between high and low groups on psychoticism in terms of the development of moral reasoning.
5. To study the difference between democratic, laissez-faire and autocratic parenting in terms of the development of moral reasoning on the following factors:

   (i) Control
   (ii) Protectiveness
   (iii) Punishment
   (iv) Conformity
   (v) Social Isolation
   (vi) Reward
   (vii) Deprivation of Privileges
   (viii) Nurturance
To study the difference between students of Public schools and Government Schools in terms of the development of moral reasoning.

4.2 HYPOTHESES OF THE STUDY

There are different ways of formulating hypotheses but the present investigator has adopted the Null form in formulating the hypotheses of present study after going through the related literature.

The following hypotheses have been framed to conduct the study:

1. There is no significant difference between high and low groups on intelligence in terms of the development of moral reasoning.
2. There is no significant difference between extrovert and introvert groups of children in terms of the development of moral reasoning.
3. There is no significant difference between high and low groups on neuroticism in terms of the development of moral reasoning.
4. There is no significant difference between high and low groups on psychoticism in terms of the development of moral reasoning.
5. There is no significant difference between the democratic, laissez-faire and autocratic parental control on the development of moral reasoning.
6. There is no significant difference between the democratic, laissez-faire and autocratic parental protectiveness on the development of moral reasoning.
7. There is no significant difference between the democratic, laissez-faire and autocratic parental punishment on the development of moral reasoning.
8. There is no significant difference between the democratic, laissez-faire and autocratic parental conformity on the development of moral reasoning.
9. There is no significant difference between the democratic, laissez-faire and autocratic parental social isolation on the development of moral reasoning.
10. There is no significant difference between the democratic, laissez-faire and autocratic parental reward on the development of moral reasoning.
11. There is no significant difference between the democratic, laissez-faire and autocratic parental deprivation of privileges on the development of moral reasoning.

12. There is no significant difference between the democratic, laissez-faire and autocratic parental nurturance on the development of moral reasoning.

13. There is no significant difference between the democratic, laissez-faire and autocratic parental rejection on the development of moral reasoning.

14. There is no significant difference between the democratic, laissez-faire and autocratic parental permissiveness on the development of moral reasoning.

15. There is no significant difference between students of Public schools and Government schools in terms of the development of moral reasoning.

4.3 PROCEDURE OF THE STUDY

In order to achieve the objectives stated above and to test the corresponding hypotheses, a sample of 300 subjects of both sexes belonging to various sections of the society and studying in different schools of Delhi was taken. The schools were selected randomly and the subjects were selected on the basis of cluster sample. For collecting data four types of tests and inventories were administered. These tests and inventories were chosen keeping in view the objectives of the study. These were:

- For measurement of intelligence, Cattell’s culture fair (non-verbal) intelligence test was used.
- For measurement of neuroticism, extraversion-introversion and psychoticism, Eysenck personality questionnaire was used.
- For measurement of environment variables Standard Home Environment inventory by Dr. Karuna Shankar Mishra was used.
- For measurement of moral reasoning standard moral dilemma situation were presented to the subjects and they were asked to resolve the dilemma situation according to what they think as right. They further were asked to give reasons for their choices in the dilemma situation.
4.4 DELIMITATIONS OF THE STUDY

4.4.1 Sample

Since the study was intended to see the development of moral reasoning among adolescents the sample was selected keeping in view the age norms pertaining to this period (adolescence) of child’s growth. Subject’s age range was from fourteen to fifteen years of age. The study was conducted on ninth class students. The investigator selected a sample from different secondary schools of Delhi. The schools were selected randomly and the subjects were selected on cluster basis i.e. from a particular school, the entire section of a particular class was included into the sample. In order to attain reasonable stratification, schools were randomly selected from the city areas as well as the neighbouring rural areas. The sample comprised rural and urban, boys and girls and co-education schools. In this way, the investigator was satisfied that a sample under study was sufficiently representative of the population of Delhi. Hence, the study was delimited in respect of sample, the concepts, tools and statistical procedures.

4.4.2 Concepts

As discussed earlier, the development of moral reasoning in the child depends upon a host of factors, which vary with respect to place, time and individual. Nevertheless, there are certain variables, which influence such development/reasoning substantially and are common in a variety of situations and people. Though, it is not possible to consider all such factors in behavioural sciences research like this, yet, the effort has been made to study the effect of such factors which are most prominent in an educational setting of the child. Keeping in view, the constraints of space and time the investigator delimited the study to the following concepts which are said to have a significant bearing upon the development of moral reasoning of the child. Behavioural definitions of the different concepts used in the present study are as follows:

(1) Control: Refers to autocratic atmosphere in which several restrictions are imposed by the teachers or parents in order to discipline them.
(2) Protectiveness: Refers to prevention of independent behaviour of the child by the parents. They consider their children as an infant throughout their life.
(3) **Punishment:** It includes “Physical as well as affective punishment to avoid the occurrence of undesirable behaviour.”

(4) **Conformity:** Refers to demand from children to act, to work according to parent’s desires and expectation. Parents give them directions, instructions, orders and the child is assumed to work accordingly.

(5) **Social Isolation:** It indicates “Use of Isolation from beloved persons except family members for negative sanctions.”

(6) **Reward:** It includes “Material as well as symbolic rewards to strengthen or increase the probability of desired behaviour.”

(7) **Deprivation of Privileges:** It implies “Controlling children’s behaviour by depriving them of their rights to seek love, respect and child care from parent.”

(8) **Nurturance:** It indicates “Existence of excessive unconditional physical and emotional attachment of parents with the child. Parents have a keen interest in and love for the child”.

(9) **Rejection:** Refers to restriction on child’s behaviour imposed by parents or teachers. They don’t recognize the student’s right to deviate, act freely and become an autonomous individual.

(10) **Permissiveness:** It includes “Provision of opportunities to child to express his views freely and act according to his desires with no interference from parents”.

(11) **Psychoticism:** It is an independent dimension which describes the personality as solitary, troublesome, cruel, lacking in feeling and empathy, hostile to others, sensation seeking, and liking odd and unusual things.

(12) **Neuroticism:** Refers to the general emotional liability of a person, his emotional over-responsiveness and his liability to neurotic breakdown under stress.

(13) **Extraversion:** As opposed to introversion, extraversion refers to the out-going, uninhibited, sociable proclivities of a person.

(14) **Autocratic Parents:** These parents are very harsh disciplinarians. Such parents do not tolerate even slightest deviation of child’s activity and behaviour from what they consider as an ideal behaviour.

(15) **Laissez-faire Parents:** These parents allow complete freedom to the child and impose no restriction on the child even if the child behaves in anti-social ways. They avoid any kind of interference in child ways.

(16) **Democratic Parents:** These parents show due love and affection and freedom which is necessary for the proper development of the child’s personality. They
avoid all kinds of "extremes" and develop a democratic / interactive behaviour pattern with their children.

4.4.3 Description of the Tools

In order to obtain measures on above mentioned concepts the following tools were used:

1. Home Environment Inventory

The present home environment inventory (HEI) is an instrument designed to measure the psycho-social climate of home as perceived by children. It provides a measure of the quality and quantity of the cognitive, emotional and social support that has been available to the child within the home. HEI has 100 items belonging to 10 dimensions of home environment. These dimensions are: Control, Protectiveness, Punishment, Conformity, Social Isolation, Reward, Deprivation of Privileges, Nurturance, Rejection and Permissiveness.

(i) Description of the Inventory

HEI contains 100 items related to ten dimensions of home environment. Each dimension has ten items belonging to it. The instrument requires pupils to tell the frequency with which a particular parent child interaction behaviour has been observed by them in their homes, i.e. he/she is requested to tell whether a particular parental behaviour (as mentioned in an item) occurs – Mostly, Often, Sometimes, Least, Never.

There is no time limit for this tool.

(ii) Administration of the Inventory

Home Environment Inventory can be administered in individual and group setting. To start with student should be made familiar with the nature and purpose of measurement of home environment. Later, the procedure for marking the responses on the booklet should be explained to them. They should be asked to put ‘X’ mark on
any cell indicating their perception of frequency with which a particular behaviour has been exhibited by their parents.

Students should feel assured about the confidential nature of their responses. At the time of administration in group setting, the space between individual should be adequate so that other students may not guess about the response made by the other student against a particular item. Student should be allowed to omit items which they find difficult or impossible to respond. This should be treated as a symbol of individual’s tendency to give socially desirable responses. For research purposes, the scores of such students should not be used unless interviewing or any other technique is used to ensure the validity of their responses.

(iii) Scoring the responses to HEI Items:

The responses are to be given on the booklet itself. There are five cells against every item of the inventory. Each cell indicate the frequency of occurrence of a particular behaviour. The five cells belonging to five responses namely: Mostly, Often, Sometimes, Least and Never. The dimension to which a particular item belongs has been indicated by alphabets near the serial number of the items. Assign 4 marks to ‘mostly’, 3 marks to ‘often’, 2 marks to ‘sometimes’, 1 mark to ‘least’ and zero mark to ‘never’ responses. Count the marks assigned to A, B, C, D, E, F, G, H, I and J dimension – statement on every age and then add the dimension scores awarded to statements given on the five pages so as to get ten scores for the ten dimensions of HEI.

(iv) Reliability

The split half reliabilities (corrected for length) for various dimensions of home environment are as follows:
Table 4.1

Split half reliability coefficient for ten dimensions of home environment as measured by HEI

<table>
<thead>
<tr>
<th>Inventory Dimensions</th>
<th>Reliability Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Control</td>
<td>0.879</td>
</tr>
<tr>
<td>B. Protectiveness</td>
<td>0.748</td>
</tr>
<tr>
<td>C. Punishment</td>
<td>0.947</td>
</tr>
<tr>
<td>D. Conformity</td>
<td>0.866</td>
</tr>
<tr>
<td>E. Social Isolation</td>
<td>0.870</td>
</tr>
<tr>
<td>F. Reward</td>
<td>0.875</td>
</tr>
<tr>
<td>G. Deprivation of Privileges</td>
<td>0.855</td>
</tr>
<tr>
<td>H. Nurturance</td>
<td>0.901</td>
</tr>
<tr>
<td>I. Rejection</td>
<td>0.841</td>
</tr>
<tr>
<td>J. Permissiveness</td>
<td>0.726</td>
</tr>
</tbody>
</table>

v. **Validity:**

Home Environment Inventory has been found to possess content validity as measured with the help of views expressed by judges. Criteria related validity could not be established because of the lack of appropriate external criteria.

vi. **Uses of Home Environment Inventory:**

Home Environment Inventory can be used to measure children’s perception of parental child rearing behaviours i.e. home environment. This tool has been standardized on students of intermediate classes and has been successfully used for students of VIII to X classes.

2) **CULTURE FAIR (NON-VERBAL) INTELLIGENCE TEST**

(i) **Description of the Test**

The Culture Fair Intelligence Tests measures individual intelligence in a manner, designed to reduce, as much as possible, the influence of verbal fluency,
cultural climate and educational level. The form of the test contains total 50 items. The test contains four sub tests, involving different perceptual tasks, so that the composite intelligence measure avoids spurious reliance on a single skill.

(ii) Administration of the Test

The tests, which may be administered individually or in a group, are non-verbal and require only that examinees be able to perceive relationships in shapes and figures. To start with, students should be made familiar with the nature and purpose of Intelligence test later, the procedure for marking the responses on the booklet should be explained to them. They should be asked to put a cross (X) in the box corresponding to the answer they choose as correct in the test booklet.

Before distributing the test booklets and answer sheets (if separate sheets are to be used), caution the group that the booklets are not to be opened until they are told to do so. Place the booklet on the desk with the front cover facing up. Have them fill in the information at the top of the answer sheet or cover page (if booklets are to be written in). The room should be well lighted, the temperature comfortable and desks widely spaced.

(iii) Time Limit

Time limits must be strictly adhered to and under no circumstances altered to allow fewer or more persons to complete a given subtest.

Table 4.2

<table>
<thead>
<tr>
<th>Items and time allotted to each sub test in scale 3, Form A</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number of Items</strong></td>
</tr>
<tr>
<td>Test 1. Series</td>
</tr>
<tr>
<td>Test 2. Classification</td>
</tr>
<tr>
<td>Test 3. Matrices</td>
</tr>
<tr>
<td>Test 4. Conditions (Topology)</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>
(iv) Scoring of the Test

Following are the instructions for the scoring of the test:

a. Lay the stencil over the answer sheet, lining up the bottoms and left hand side of stencil key and answer sheet.

b. One point is given for each correct item. Thus, the total possible score to test 1 is 13; for test 2 is 14; for test 3 is 13; and for test 4 is 10. Note that in test 2 where 2 responses are required, both answers must be given in order to count the question right. The 2 responses in each case have been joined with a line to add in scoring and no point is allowed for the question unless the 2 answers are there.

c. It is not necessary to keep scores for tests 1, 2, 3 and 4 separate. Simply count the total number of questions correct in the 4 tests together and record that number in the total score space in the bottom right-hand corner of the answer sheet.

d. Consult Manual to convert the total score (raw score) to I.Q.

(v) Reliability of the Test

Reliability requires that a test be consistent. Since no single index of consistency is likely to satisfy all possible uses to which the test will be put, three separate methods of evaluation are given. The first method evaluates consistency in item content, while the second evaluates consistency across the two parts of each test. The third method evaluates consistency in test score over time.
### Table 4.3

#### Reliability of the Culture Fair Test: Scale 3, FORM A

<table>
<thead>
<tr>
<th>Method of Evaluation</th>
<th>Average Reliabilities Across Samples Form A</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONSISTENCY OVER ITEMS</td>
<td></td>
</tr>
<tr>
<td>(calculated by a variety of methods including split-half and appropriate internal consistency formulas)</td>
<td>0.74</td>
</tr>
<tr>
<td>CONSISTENCY OVER PARTS</td>
<td></td>
</tr>
<tr>
<td>(interform correlations corrected to appropriate length)</td>
<td>0.70</td>
</tr>
<tr>
<td>CONSISTENCY OVER TIME</td>
<td></td>
</tr>
<tr>
<td>(test-retest correlations, time interval varying from immediate to one week)</td>
<td>0.69</td>
</tr>
</tbody>
</table>

(vi) **Validity of the Test**

### Table 4.4

#### Validities of the Culture Fair Test: Scale 3, Form A

<table>
<thead>
<tr>
<th>Method of Evaluation</th>
<th>Average Reliabilities Across Samples Form A</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONCEPT VALIDITY</td>
<td></td>
</tr>
<tr>
<td>(direct correlations with the pure intelligence factor)</td>
<td>0.85</td>
</tr>
<tr>
<td>CONCRETE VALIDITY</td>
<td></td>
</tr>
<tr>
<td>(correlations with other tests of general intelligence including the Otis, Intelligence Structure Test)</td>
<td>0.66</td>
</tr>
</tbody>
</table>
In the above table, two approaches to validation are illustrated. The first evaluates how well the test measures the pure intelligence factor ('g', as the early intelligence theorists identified it) which it was designed to measure. The figure shows the average correlations across independent factor analysis and across cultures.

The second half of the table shows the average correlation of the Culture Fair Scales with other measures of general intelligence, some non-verbal, others substantially verbal in content.

(vii) **Uses of the Test**

The Culture Fair Tests are valuable instruments for all uses to which an intelligence test is rationally applied, notably:

a. Discovering whether the achievement of each individual is what would be expected from his intelligence, thus facilitating identification of emotional or learning problems which they exist;

b. Assessing an applicant's potential to perform job-relevant tasks that involve cognitive ability;

c. Making a more reliable and informed decision whether a particular child may require special educational facilities or a program of cultural enrichment;

d. Selecting students for accelerated educational programs within an age-group grade;

e. Advising students in regard to probable success in college or the chance of winning a scholarship;

f. Increasing the effectiveness of vocational guidance decisions both for students and adults.

3. **MORAL DILEMMAS**

Four dilemmas were adopted. These were given to 300 students of five different schools of Delhi.
(i) Administration

Rapport was established with subjects and necessary instructions were given to them.

(ii) Scoring

Each child’s response were scored according to Kohlberg’s Scoring Manual (1973). All the moral issues were scored separately and then overall score was assigned taking into consideration scores for all the issues. The Moral Maturity Scores (MMS) which is a weighted average of scores obtained in the different moral stages, was computed in the following way for each child:

a. The total score for each stage was obtained by adding the scores on each of the 10 issues [Parental affection vs. Duty, Obedience vs. Self interest, Helping vs. Interfering Others, Right to property vs. Concerns for life, Concerns of affection vs. Distributive justice, Life vs. Contract promise, Stealing vs. Life, Life vs. Law, Affectionate vs. Interference, Mercy Killing (Euthanasia) vs. Duty].

b. The scores obtained by the child on the various stages were converted into percentage.

c. The percentages were multiplied with their respective stage numbers to obtain the weighted scores.

d. The sum total of the scores thus obtained is the MMS.

4. EYSENCK’S PERSONALITY QUESTIONNAIRE – R

(i) Description of the Questionnaire

The Eysenck’s Personality Questionnaire is the result of many years of developmental work. It was designed to give rough and ready measure of three important personality dimensions: Psychoticism, Extraversion and Neuroticism. Each of these three traits are measured by means of 90 questions, carefully selected after lengthy item analysis and factor analysis.
(ii) **Administration of the Questionnaire**

The Eysenck’s Personality Questionnaire may be administered individually as well as in the group. To start with, students should be made familiar with the nature and purpose of the Eysenck’s Personality Questionnaire. Later, the procedure to be followed while marking responses on the booklet should be explained to them. They should be told to put (X) mark in the box following “Yes” or “No”. There are no right or wrong answers or no trick questions. The respondents should be told to work quickly and do not think too long about the exact meaning of the question. When the researcher is sure that the respondents have understood the way of recording their responses, they should be permitted to begin the actual work. Respondents should be further informed that they should not consult their friends in expressing their feelings.

(iii) **Time Limit**

There is no fixed time limit for the responses. Usually respondents take 20 to 30 minutes in filing the whole questionnaire.

(iv) **Scoring for Eysenck’s Personality Questionnaire**

Following are the instructions for scoring:

1. Check that each question has only one answer.
2. Place the scoring key on the booklet so that the (*) marks on the booklet are visible through the circles on this key.
3. There are four scores (Psychoticism, Extraversion, Neuroticism, Lie Scores) to be obtained. Each answer scores one point.
4. For example, to obtain the score for Psychoticism, add one score for each answer visible through the squares, and record the sum in the table on page one of the booklet. Do the same for page 2, 3 and 4. Transfer these scores on the table at the back page.
5. Repeat this procedure to obtain Extraversion, Neuroticism and Lie Score also.
(v) **Reliability of the Questionnaire**

The reliability value for Psychoticism is 0.78, Extraversion is 0.89, Neuroticism is 0.86 and for Lie Score is 0.84

(vi) **Validity of the Questionnaire**

<table>
<thead>
<tr>
<th>Personality Dimensions</th>
<th>Validity Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychoticism</td>
<td>0.27 – 6.87</td>
</tr>
<tr>
<td>Extraversion</td>
<td>7.77 – 18.10</td>
</tr>
<tr>
<td>Neuroticism</td>
<td>7.54 – 15.01</td>
</tr>
<tr>
<td>Lie Score</td>
<td>3.55 – 10.94</td>
</tr>
</tbody>
</table>

(vii) **Uses of the Questionnaire**

It can be used for both the sexes. It will discriminate between the individuals who are lacking in feelings, emotional over-responsiveness or outgoing. It is especially helpful to the school counselors and clinical psychologists to identify the three important personality dimensions: Psychoticism, Extraversion and Neuroticism.

4.5 **RESEARCH DESIGN OF THE STUDY**

It was a descriptive study. Scoring was done according to standard procedure given in the manuals of different tools. The data so obtained were processed statistically using appropriate statistical techniques as given below:

- t-test
- Correlations
- ANOVA