CHAPTER-III

METHODOLOGY

This chapter is planned to discuss the following points -

The problem.
Hypothesis.
Variables under study.
Tools used in the study.
Design of the study.

The method of finding an independent variable as starting a tentative question is called hypothesis. This hypothesis is needed to give the research work a direction. The hypothesis is tested, explained, and postulated, and the data collected and analysed, and the results indicate the validity of the hypothesis being tested (accepted) or rejected. The researcher may be able to verify his statements.
METHODOLOGY

A scientific method of finding the relationship between independent and dependent variables starts with a problem. Problem poses a question and a tentative answer to the question is called hypothesis. This hypothesis is advanced to give the research work a direction. Then an experiment is planned and conducted to collect the data with the help of some apparatus or tool. The data is then tabulated and analysed, and the results indicate the probability of the hypothesis being true (accepted) or false (rejected). After this, the scientist may be able to generalize his statements.

This chapter is planned to elaborate the following points:

1. The problem.
2. Hypothesis.
3. Variables under study.
4. Tools used in the study.
5. The design of the study.
1. **PROBLEM**

A study of the personality as related with the pro-social behaviour and religiosity in Hindu and Muslim boys and girls.

2. **HYPOTHESES**

Following Hypotheses are to be tested:

1. Personality factors are related with the prosocial behaviour of the individual.
2. Personality factors are related with the religiosity of the individual.
3. Personality factors are related with the religion of the individual.
4. Personality factors are related with the sex of the individual.
5. There will be interaction between prosocial behaviour and religiosity relation with the personality factors.
6. There will be interaction between prosocial behaviour and religion in relation with the personality factors.
7. These will be interaction between prosocial behaviour and sex in relation with the personality factors.
8. Religiosity and religion will interact in the set.
9. Religiosity and sex will interact in the set.
10. Religion and sex will interact in the set.
11. Pro-social behaviour, religiosity and religion will have interactional relation with the personality factors.
12. Pro-social behaviour, religiosity and sex will have interactional relation with the personality factors.
13. Pro-social behaviour, religion and sex will interact in the set.
14. Religiosity, religion and sex will have interactional relation with the personality factors.
15. Pro-social behaviour, religiosity, religion and sex will have interactional relation with the personality factors.

3. VARIABLES UNDER STUDY

INDEPENDENT VARIABLES :-

1. Pro-social behaviour — Lower & High
2. Religiosity — Low & High
3. Religion — Hindu & Muslim
4. Sex — Boys & Girls
DEPENDENT VARIABLES :-

Dependent variables in the present study are personality factors. Hindi version of 16 personality factors test of Cattell was used, The description of the 16 personality factors is as follows :-

1. Factor 'A'

Sizothymia (A-) V/s Affectothymia (A+). A+ individual expresses marked preference for occupation dealing with people, enjoys social recognition and is generally willing to "go along" with expediency. A+ persons are more generous in personality relationships, less afraid of criticism. A- persons are reserved, detached, critical stiff, cool and skeptical. A- persons are precise and rigid in their ways of doing things. They are more interested in things rather than in persons.

2. Factor 'B'

Low intelligence (B-) V/s High Intelligence (B+) B- persons tend to be less intelligent. They have concrete thinking and low scholastic mental capacity. They are slow in learning and grasping the things. They are dull having poorer judgement and lower morale.
B+ persons are quick to grasp and learn the things. They have more intellectual interests, show better judgement, high morale and are preserving.

3. Factor 'C'

Emotional instability (C-) V/s Higher ego strength (C+)

C- persons are affected by feelings, get emotional when frustrated, are emotionally less stable, easily upset, tend to give up the responsibilities, dissatisfied with family, life, personal health and feels unable to cope with life.

C+ individuals are more frequently leaders than are C- individuals. C+ persons maintain good group morale, they are emotionally mature, stable, constant in interests, adjustable, unperturbed, face reality with calmness.

4. Factor 'E'

Submissiveness (E-) V/s Dominance or Ascendence (E+)

E- individuals are obedient, submissive, dependent, considerate, diplomatic, conventional conforming, easily upset by authority, docile and accommodating.

E+ persons are assertive, independent minded, stern, hostile unconventional, rebellious, aggressive, competitive and administration demanding.
5. Factor 'F'

Desurgency (F-) V/s Surgency (F+)

F- persons are sober, introspective, incommunicative, slow and cautious. These persons stick to values.

F+ persons are enthusiastic, talkative, cheerful, happy-go-lucky, frank, expressive, quick and alert.

6. Factor 'G'

Low Superego strength (G-) V/s Superego strength (G+)

G- individuals disregard rules and people, they are undependable and self-indulgent.

G+ persons are conscientious, persistent, moralistic, determined and responsible. They are emotionally ordered, dominated by sense of duty, concerned about moral standards and rules.

7. Factor 'H'

Threctia (H-) V/s Permia (H+)

H- persons are shy, withdrawn and timid. They are emotionally cautious, restrained, rule bound, careful
and quick to see dangers. They have restricted interests.

H+ persons are adventurous, active and socially bold. They are impulsive and have artistic interests; such persons are carefree, they do not see dangers.

8. Factor 'I'

Harria (1-) V/s Premsia (1+)

1- persons are tough minded, unsentimental, self-reliant, hard, practical, logical. They take responsibilities, are not prone to physical disabilities, reject illusions and unaffected by "Francies".

1+ persons are tender minded, are fussing, sensitive, dependent, insecure, seeking help and sympathy. 1+ persons are over protected attention seeking, hypochondrical, anxious about self, imaginative in inner life and in conversation.

9. Factor 'L'

Alaxia (L-) V/s Protension (L+)

L- individuals are trusting, understanding, tolerant and permissive. They accept conditions and personal unimportance. They are ready to forget
difficulties and are conciliatory.

L persons are suspecting, jealous, dogmatic, frustrated and tyrannical. They are irritable, scrupulously correct in behaviour, annoyed by people putting on superior airs, skeptical of idealistic motives in others.

10. Factor 'M'

Praxerinia (M-) V/s Autia (M+)

M- persons are conventional and practical to needs, they are concerned with immediate interests and issues. They are guided by objective realities. They are dependable in practical judgements.

M+ persons are imaginative, bohemian, absent-minded, unconventional absorbed in their ideas, interested in art, theory, basic values and fanciful.

11. Factor 'N'

Naivete (N-) V/s Shrewdness (N+)

N- individuals are forthright and unpretentious, they are genuine but socially clumsy. They have vague and injudicious mind. They have blind trust in human nature, are unskilled in analysing the motives of
others, accept the things as they come, have simple
tastes, lack self-insight and get emotionally involved
with others.

N+ persons are astute and wordly, they are
polished, socially aware, insightful regarding self and
others. Emotionally, they are detached and disciplined,
have exact and calculating mind.

12. Factor 'O'

Untroubled adequacy (O-) V/s Guilt proneness (O+)

O- persons are self-assured, placid, secure and
complacent. They are cheerful resilient and impenitent.
They do not care for people's approval or disapproval.
They have no fears and are rudely vigorous.

O+ persons are apprehensive, self-reproaching,
worried, anxious, troubled and insecure. They are
easily touched, depressed, scrupulous, fussy and
inadequate. They are very sensitive to people's approval
and disapproval. They are lonely and brooding.

13. Factor 'Q1'

Conservatism (Q1-) V/s Radicalism (Q1+)

Q1- individual is conservative, respecting
established ideas tolerant of difficulties.
Q1+ persons are experimenting, liberal analytical
and free in their thinking. They are more well informed
less inclined to moralize, break the crust of custom and
tradition, and lead and persuade people.

Q4- persons are relaxed, tranquil, unfrustrated

14. Factor 'Q2'

Group dependency (Q2-) V/s Self-Sufficiency (Q2+)

Q2- persons are sociably group dependent, depend
upon social approval and are conventional and follower.

Q2+ persons are self-sufficient, resourceful,
independent in decisions.

15. Factor 'Q3'

Low self-sentiment integration (Q3-) V/s High
Strength of self-sentiment (Q3+)

Q3- individuals are prone to be uncontrolled, lax,
impulsive and do not care for social rules.

Q3+ individuals are controlled, exacting will
power, persistent, having foresight, are considerate to
others, conscientious and follow socially approved norms
of behaviour.
16. **Altruism Scale:**

Factor 'Q4'

Low ergic tension (Q4-) V/s High ergic tension (Q4+)

Q4- persons are relaxed, tranquil, unfrustrated and composed, Q4+ persons are tense frustrated, driven, fretful and excited.

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**Independent Variables**

- Pre-social behaviour - Lower & High
- Religiosity - Low & High
- Religion - Hindu & Muslim
- Sex - Boys & Girls
- 16 Personality
- Factor
- Reliability coefficient of the scale is .57.

**Dependent Variables**

TOOLs USED IN THE STUDY

In the present study the following tools were used:

1. **Altruism Scale:**
   (Hindi version) developed by S.N. Rai & Sawant Singh.

2. **Religiosity Scale:**
   (Hindi version) developed by L.I. Bhushan.

3. **16 P.F:**
   16 P.F Cattell (Hindi version developed by S.D. Kapoor).
1. **ALTRUISM SCALE**

Altruism scale developed by Dr. S.N. Rai is a verbal test in Hindi. The scale consists of 30 items and three response categories. The test can be administered in both situations individuals and group.

2. **RELIGIOSITY SCALE**

Religiosity scale developed by L.I. Bhushan measures the degree to which an individual can be identified as religious. "Being Religious" is different from "Having a Religion". The test contains 36 items, out of which 25 are positive and 11 negative items. It can be administered in both individual and group situations. The Reliability coefficient of the scale is .82 and validity against Allport, Vernon, Lindzey study of values is .57.

3. **16 P.F**

16 P.F test is multidimensional set of 16 questionnaire scales designed to make available information about an individual's standing on the primary personality factors. The 16 factors of the test cover the commonly studied personality factors such as intelligence, emotional stability, super ego strength, etc. All 16 P.F forms can be administered in both group and individual situations. It is a highly reliable and
valid test, frequently used in the studies conducted on personality.

SCORING :-

Scoring on all the three scales was done as per instructions of the manuals of the respective tests.

DESIGN OF THE STUDY :-

"Research in any given area usually progresses through two stages; First, we seek to determine which of many possible independent variable, influences a given dependent variable; and second, when a certain independent variable has been identified as influential on a dependent variable we attempt to establish the precise relationship between them." (McGuigan, 1969, p.195).

The experimental design with two group establishes the relationship between the dependent variable and the independent variable if only two values of the independent variable are under study. By using a three groups design, the relationship may be established more precisely. The principle with a three groups design would be select two extreme values of the independent variable and also one value midway between them. With a two groups design, One is never sufficiently sure that
he has selected the appropriate value of the independent variable in his attempt to determine whether or not that variable is effective. By using more than two groups, he increases the chances (1) accurately determining whether a given independent variable is effective, (2) specifying the relationship between the independent and the dependent variable. "The more values of the independent variables sampled, the better our estimation of its influence on a given dependent variable." (McGuigan, 1969, P. 203). If the independent variable is varied in more than two ways, the Multi Group design is used.

Further, it is possible to study more than one independent variable in a single experiment. The design for studying two or more independent variables, in a single experiment is, a FACTORIAL DESIGN. A complete factorial design is one where all possible combinations of the selected values of each of the independent variables are used. In factorial design, the number of variables that can be studied is unlimited.

Further, more, independent and dependent variables do not always have similar relationship in all people. Rather, they interact in such a way that people with certain characteristics behave one way, but
people with the same characteristics in addition to other characteristics behave another way.

In the present study a design with more than two groups was the correct choice, because four independent variables having two values each were studied. Two levels of pro-social behaviour—low & high, two values of religiosity—low & high, two levels of religion—Hindu & Muslim, and two levels of sex—Boys & Girls, are under study. Thus a factorial design — 2x2x2x2 was selected.

**SAMPLING**

The present study was conducted on the college going girls and boys of Meerut city. The total sample to be drawn out of this population was 800. Which was divided into four categories as follows:

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Girls</strong></td>
<td><strong>Muslim</strong></td>
<td><strong>50-50</strong></td>
<td><strong>200</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Hindu</strong></td>
<td></td>
<td><strong>200</strong></td>
</tr>
<tr>
<td><strong>Boys</strong></td>
<td><strong>Muslim</strong></td>
<td></td>
<td><strong>200</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Hindu</strong></td>
<td></td>
<td><strong>200</strong></td>
</tr>
</tbody>
</table>

All the degree and post graduate colleges of Meerut city were included in the sample and small groups of 20-25 students were drawn from each college at random basis. The three scales — Altruism, Religiosity and 16 PF were administered to these small groups. Each group
took about 90 minutes to answer all the three scales.

After collecting the data scoring was done as prescribed by the manual of each scale and following are the tables of scores on Altruism and Religiosity scale:

**TABLE 3.1: FREQUENCY DISTRIBUTION OF ALTRUISM SCORES**

<table>
<thead>
<tr>
<th>Altruism Class Interval</th>
<th>Hindu Boys</th>
<th>Hindu Girls</th>
<th>Muslim Boys</th>
<th>Muslim Girls</th>
</tr>
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<tbody>
<tr>
<td>60 - 64</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>55 - 59</td>
<td>8</td>
<td>18</td>
<td>11</td>
<td>17</td>
</tr>
<tr>
<td>50 - 54</td>
<td>39</td>
<td>63</td>
<td>44</td>
<td>78</td>
</tr>
<tr>
<td>45 - 49</td>
<td>60</td>
<td>67</td>
<td>48</td>
<td>66</td>
</tr>
<tr>
<td>40 - 44</td>
<td>47</td>
<td>29</td>
<td>34</td>
<td>29</td>
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<tr>
<td>35 - 39</td>
<td>20</td>
<td>12</td>
<td>25</td>
<td>8</td>
</tr>
<tr>
<td>30 - 34</td>
<td>14</td>
<td>5</td>
<td>13</td>
<td>1</td>
</tr>
<tr>
<td>25 - 26</td>
<td>5</td>
<td>5</td>
<td>14</td>
<td>1</td>
</tr>
<tr>
<td>20 - 24</td>
<td>4</td>
<td>1</td>
<td>7</td>
<td>x</td>
</tr>
<tr>
<td>15 - 19</td>
<td>x</td>
<td>x</td>
<td>2</td>
<td>x</td>
</tr>
<tr>
<td>10 - 14</td>
<td>3</td>
<td>x</td>
<td>2</td>
<td>x</td>
</tr>
<tr>
<td>5 - 9</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>N</th>
<th>200</th>
<th>200</th>
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<tbody>
<tr>
<td>Mean</td>
<td>44.12</td>
<td>50.50</td>
<td>43.80</td>
<td>50.50</td>
</tr>
</tbody>
</table>

**Graph 3.1**

**TABLE 3.2: FREQUENCY DISTRIBUTION OF RELIGIOSITY SCORES**

(0) Low Religiosity - High Altruism
(1) High Religiosity - Low Altruism
(11) High Religiosity - High Altruism
(12) High Religiosity - High Altruism
On the basis of these scores 16 groups were made as follows:

Girls - Muslim - (1) Low Religiosity - Low Altruism
(2) Low Religiosity - High Altruism
(3) High Religiosity - Low Altruism
(4) High Religiosity - High Altruism
Hindu - (5) Low Religiosity - Low Altruism
(6) Low Religiosity - High Altruism
(7) High Religiosity - Low Altruism
(8) High Religiosity - High Altruism
Boys - Muslim - (9) Low Religiosity - low Altruism
(10) Low Religiosity - High Altruism
(11) High Religiosity - Low Altruism
(12) High Religiosity - High Altruism
These 16 groups (each having 50 Subjects) were finally scored on 16 personality factors and the statistical treatment of the scores is discussed in the next chapter.