CHAPTER III

THE RESEARCH DESIGN
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The chapter entitled research designs gives a brief history of the method used in conducting the research, the sample and the tools used for the collection of data. It also tells the presentation adopted by the researcher for the collection of data along with the statistical techniques used and the rationale underlying them. The study in question is aimed at comparing the general intelligence, level of aspiration and awareness of facilities provided to the Scheduled Castes students of the Senior Secondary stage and their impact upon the academic achievement. The main tools used in this study are administered upon a sample of 500 Senior Secondary stage Scheduled Castes students for analysis and interpretation of data. The sample consisted of male and female, rural and urban Scheduled Castes students.
DESIGN OF THE STUDY

METHOD USED IN THE STUDY

According to the nature of the present study, Normative Survey Method has been used for the collection of data. All the three tolls were administered upon the sample and thus the data was collected by the Investigator for analysis and further interpretation.

SAMPLE

The Researcher selected 500 Scheduled Castes students from the 28 Senior Secondary schools of Rohtak District, being the biggest district of Haryana state.
TOOLS USED IN THE STUDY

The following tools have been used for the collection, analysis and interpretation of data for coming to certain conclusions.

<table>
<thead>
<tr>
<th>SI. No</th>
<th>TEST</th>
<th>CONSTRUCTED AND STANDARDIZED BY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>GENERAL INTELLIGENCE TEST</td>
<td>Dr. R.K. OJHA &amp; Dr. RAY CHAUDHARY</td>
</tr>
<tr>
<td>2</td>
<td>LEVEL OF ASPIRATION</td>
<td>Dr. V.P. SHARMA AND Dr. ANURADHA GUPTA</td>
</tr>
<tr>
<td>3</td>
<td>AWARENESS OF FACILITIES</td>
<td>PREPARED BY THE RESEARCHER HIMSELF</td>
</tr>
</tbody>
</table>
GENERAL INTELLIGENCE TEST

Dr. R.K. Ojha and Dr. Chaudhary test has been used to measure the general intelligence of the students. Intelligence tests are generally of two types verbal intelligence test and non-verbal intelligence test. Again both these types of tests are individual tests and group tests. Verbal intelligence test (VIT) was developed by Dr. R.K. Ojha in the year 1930 to measure the verbal intelligence of the students of the age group 13-20 years. Description of the tests is given as under:

The test is objective type test and measures the general intelligence of the students. The tests has 8 parts having different types of questions and having different difficulty value. The classification of the test are as under:
CLASSIFICATION

The test has eight parts and all the parts have separate number of questions, for example:-

1. This special test has 15 steps. Each step has 5 words in which one word is different from the other four words. The different word has to be chosen for this test.

2. **Analogies**: In this sub test, there are 15 steps and in every set, there are four alternatives. In the first two words pair, there is some relationship. The candidate has to choose the word for the 3rd word from the given alternatives.

3. **Synonyms**: In this test 20 sets have been given. In each step, four alternatives in the bracket are given. The word, which resembles very much with the
original word among these four words is to be chosen.

4. **Number test**: there are 14 steps in this test. In each set six numbers are given and the blank space is left for the 7th number to be written, which completes the series. The blank has to be filled with the number, which is appropriate and completes the series.

5. **Completion test**: This test measures the general intelligence capacity of the students, which is related to their syllabus subject. Four prose paragraphs are given. In the first paragraph five places are left to be completed. Four alternatives are given against each blank and the candidate has to underline the correct one. In this way, in the 2nd prose paragraph, two places in the 3rd prose paragraph 4 places and the four prose paragraph two places are to be underlined.
In this way in the sub test there will be 13 replies are to be given.

6. **Paragraph test**: In this test a lined diagram in which the family relations are exhibited. After that 10 questions are given, whose replies are to be written in relationship of the relations.

7. **Best reason**: In this part 10 questions are given. There are four alternatives for each questions. The candidates are required to find out only one group answer out of these four alternatives.

8. **Simple Reason**: This test is divided into two parts. In the first part "VARNMALA" with "MATRAS" are given and the counting from 1 to 57 have been written upon them. Then ten steps are given and on every step some numbers have been written. The candidates appearing for the test have to write the
numbers against the VARNMALA. In the second test there are seven questions. For the first five questions, there are three alternatives and for the next two questions, there are four alternatives. The correct alternatives are to be underlined. In this way, in this test there are 112 questions, whose maximum number amounts to 112. The test is to be completed within forty minutes time. For each sub test, the time has been written.

The test can be administered in a group and individually also.

**Scoring**

Scoring for every part of the test, a scoring key is provided for the same. For every correct response one mark is awarded. Total marks of all the eight parts are added to know the score of the test.
Reliability

The reliability of the test has been found out with the split half method is 0.87 and the reliability calculated by Kuder-Richardson formula has been found to be 0.91, which is quite high.

Validity of test has been calculated by finding the correlation between the 8 parts of the verbal intelligence test, which has been found to be on an average .50, which is also quite good to make this VIT as a valid test.

TEST OF LEVEL OF ASPIRATION

Level of aspiration means, which a person aspires or desires and the lower stage it has been deserved that the students do not have a great desire or do not have a higher aspiration. At the middle stage, the students work hard and also pray God so that they may pass the examination.
When the result is declared, they get the marks beyond their expectations which shows a variation between the Level of aspiration and Level of achievement. This is a period, where the children are not in a position to assess themselves in a proper way. As soon as the students achieve higher, than their expectations, they begin to think themselves intelligent and begin to aspire more and more without putting more hard work for the examination. That is why there occurs a gap between the level of aspiration and the Level of achievement.

**Administration of the Test of Level of Aspiration (Educational Aspiration Scale):**

The EAS is convenient to administer in group testing situation. Written instruction that direct the Students to select any one of the 10 multiple-choice responses in terms of educational qualifications is self-explanatory. However, it is desirable that the tester must establish rapport before
the lasting session begins and explain briefly what they have to do. There is no time limit, however, 25 minutes are sufficient for taking the test.

**Instructions for the Test Administration**

There are eight lists, each containing 10 items of qualifications. In view of your past experience, your educational maturity, capacity and ability as well as the efforts that you can make in attaining them, you are requested to mark one and only one which either (A) you can attain towards – (I) the end of your educational career, or (ii) after 20 years, or (B) you prefer to have towards, (iii) the end of your educational career, or (iv) after 20 years. Please don’t omit any item. Choose only one each list. Have you any thing to say.
### Scoring

The 10 items in each list have prestige values ranging from 1 to 10. Since the items having different prestige values have been randomly presented in each list, the scoring keys have presented below:

<table>
<thead>
<tr>
<th>Alternatives</th>
<th>List No.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 2 3 4 5 6 7 8</td>
</tr>
<tr>
<td>1</td>
<td>10 2 8 7 5 4 10 5</td>
</tr>
<tr>
<td>2</td>
<td>8 7 2 1 6 7 8 6</td>
</tr>
<tr>
<td>3</td>
<td>1 8 6 8 2 5 2 1</td>
</tr>
<tr>
<td>4</td>
<td>3 6 1 9 4 6 3 2</td>
</tr>
<tr>
<td>5</td>
<td>9 5 10 5 7 8 4 3</td>
</tr>
<tr>
<td>6</td>
<td>6 10 9 3 10 2 1 4</td>
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<td>7</td>
<td>7 1 3 10 8 10 5 7</td>
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<td>8</td>
<td>5 4 7 6 9 1 7 8</td>
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<td>9</td>
<td>4 9 5 2 3 3 9 9</td>
</tr>
<tr>
<td>10</td>
<td>2 3 4 4 1 9 6 10</td>
</tr>
</tbody>
</table>

Separate ‘Hand Scoring Keys’ for each of the eight lists may also be prepared for scoring the EAS, the maximum
score being 80, minimum being 8. For meaningful interpretation, these raw scores could be converted into standard score.

**Reliability**

(a) Coefficient of stability test Retest Method,

\[ \text{rtt} = .798 \]

(b) Coefficient of Internal Consistency by Split half technique using SB formula:

(a) between R & I items. \[ \text{Rtt} = .671 \]

(b) Between S & L items. \[ \text{Rtt} = .817 \]

**Validity**

(i) The EAS has been validated against Scholastic Attainment \[ \text{R} = .758 \]

(ii) It has also been validated against the Judges opinion (N=15), \[ \text{R} = .542. \]

(iii) Coefficient of predictive validity as judged on EAS, Form P.

\[ \text{R} = .55 \]
TEST OF AWARENESS OF FACILITIES

The scheduled caste students become aware of their facilities which are given to them at the Senior Secondary stage. They become acquainted with some of the facilities of the scheduled caste class and to some they become aware at the high school stage. Mostly the facilities are concerned as reservation which can further be divided into two parts:

1. Reservation in the field of states i.e. seats are reserved for the students to get students at the Senior Secondary stage.
2. Secondly, they become aware that there is reservation of job for them which is motivating factor to them for state.
3. They also get academic facilities in the form of free competitive coaching to appear at the higher
examinations organised by the public service commission at the states and the union level.

Some of the scheduled caste students also know about the concession of travel grants reservation of seats in admission even in the technical, in medical colleges. They also remain aware of the age concession being provided to have to choice a course or get a job. They also remain aware of the scholarships being provided by the concerned governments. The states have also revealed that some of the scheduled caste students join a particular course to get the scholarship only. But most of the students are not aware of the fact that who are the agencies who protect their interests. These types of awareness is to be included among the scheduled caste and scheduled tribe students. It is essential that the scheduled caste students should remain aware of the facilities being provided to them by the Government for the continuation of their studies and the various types of grants given to them to continue their
studies. Those who are aware of the facilities being provided to them, they can easily get higher education with the financial assistance being provided to them by the Government. Those who are not aware of these facilities, they have to think twice before joining any institution for any study as they have to spent a lot for that and the parents are poor to meet the expenses of their education even upto the primary or Senior Secondary level. Although the Government of India has made many schemes and has provided many facilities to the scheduled caste students at various levels ranging from primary to post-graduate classes for technical, vocational, engineering, medical, law and other types of technical education. Yet the authorities have not made it popular among the scheduled caste students to know the type of facilities being given to them at all the stages and levels of education so that they may be able to avail these opportunities to get higher and better level of education at higher and all levels without much depending upon their poor parents. The awareness facilities
questionnaire has been prepared by the researcher himself to know the extent to which the students at the Senior Secondary stage are aware of these facilities being provided to them. The answer to these questions revealed the awareness of facilities of the scheduled caste students for every correct answer or reply 1 mark is given and all these marks are added at the end to know how many marks the candidate has secured. After that the mean of the questionnaire is taken into account for further investigation and to compare the same between male and female candidates between rural and urban males and between rural and female students awareness in this areas.

ACHIEVEMENTS

Achievement of the scheduled caste students is an very important aspects of their educational activity. It is the achievement which helps for promotion to the higher class and helps as a basis for admission to the other classes. In
some of the higher education institutions marks or academic performance or academic achievement is considered for the admission to the higher classes. Therefore, every body in the school i.e. teachers and students outside the schools, the parents are involved in activities to achieve as high as they can and use even the underhand means to get as high marks as they can. There is a lot of pressure upon the students, teachers, schools, school administration and the parents so that there children should obtained the high percentage of marks for admission to the higher classes. Here in this study the percentage of marks obtained by the candidate at the high school level of the Haryana Board School Examination have been taken as the academic achievement or academic performance for comparison between the various groups. The marks obtained by the students at the Haryana Board of School Examination at the high school level have been considered reliable and valid to be used in the study for better results.
STATISTICAL TECHNIQUES USED

It is the rejection/acceptance of hypotheses which ultimately determines the contribution of the investigation in the scientific development of a particular area. In the present investigation also, various statistical techniques have been employed, as per design of the study, for testing various hypotheses, so as to arrive at certain conclusions. The main techniques that have been employed include t-test, mean, median mode and S.D. have been employed to analyze the data to come to certain conclusions.