CHAPTER - III

METHODOLOGY

3.1 INTRODUCTION

The selection of the method depends upon the nature of the problem under investigation. The method must be pre-planned and appropriate to the problem. According to Hill way “If a scholar can’t clearly describe his method, the chances are that it is too vague and general to yield him satisfactory results”. The method adopted for the present study could be described as being descriptive method and use of inferential statistics was made to arrive at results based on empirical Data. The present investigation was conducted in four phases. The first phase was concerned with planning & survey of related literature for the present investigation the second phase was the selection of the Tools, Sample & collection Data. The third phase was Analysis of Data, interpretations and conclusions were draw. In fourth phase, report writing was carried out. After taking up on a problem & determining specific objective a researcher is often confronted with the problem of selecting measuring tools & preparation of measuring devices. Factual Data obtained from any sources direct or indirect, is of great significance for every study. Such Data can be collected by adopting systematic producers. Proper Methodology, probing tools & well planned test administration for collecting Data that are relevant & adequate, both quantitatively & qualitatively, depending of course on the nature of the problem in hand. The Target population for the present investigation is the students belonging to Jammu & Kathua District Scientific & Standardized (Tools) were applied for the collection of data.
I. Selection of the sample

II. Selection of the tools

III. Administration of the tools

IV. Scoring of the tools

V. Tabulation of data

VI. Statistical Techniques employed applied in the study.

3.2 SELECTION OF THE SAMPLE

Sampling is indispensable to the researcher and the Time, Money, efforts involved don’t allow the researcher to study all possible members of the population. Sampling is the final resort for this purpose research, therefore, is invariably conducted by means of a sample drawn from the total population on the basis of which generalization are arrived at and made applicable to the Target population as a whole.

Population for the present study is comprised of all the scheduled – caste & non scheduled – caste male & female adolescent studying in Govt. & Pvt. High & higher secondary schools of Jammu & Kathua districts of Jammu province since, it was practically impossible for the researcher to reach each and sample of 1500 students using stratified random sampling Technique the details are given.

3.3 SELECTION OF THE TOOLS

For collecting data for the present research, the investigator selected the following Tests:-

1. Intelligence (M.C. Joshi)

2. Locus of Control (SAMAJAK PRATIKRIYA SUCHI).

3. Questionare for (Maths, Social studies & Gen. Science) prepared by the investigator for Academic achievement.
4. Indian Adaptation of Cattle’s Motivation Analysis test

5. Questionnaire for social familial factor prepared by the investigator.

3.4 DESCRIPTION OF THE TOOLS

A great care was taken to select only those tests which were reliable & valid & could also conveniently be administered in groups in class room situation the description of the various test Tools follows as under:-

1. Intelligence:

Joshi’s humanities group test of general mental ability the group verbal test of intelligence selected for the present study was constructed & standardized by Joshi (1964) the items in the test are arranged in a spiral omnibus fashion i.e. items of various abilities be presented in regular or irregular orders instead of by being grouped separately in subject tests the test consists of 100 items covering elements viz;

- Synonyms
- Antonyms
- Number series
- Classification
- Best answer
- Reasoning
- Analogies

The time required for the test was 20 minutes

Reliability—the reliability of the test standardized on a sample (N=1500) drawn from the students ranging from 16 to 18 yrs. Of age the students were studying in grade different high & higher secondary schools.
Validity- the test has high index of validity which is intelligence test.

**Academic achievement**

Academic achievement signifies accomplishments or gain or a performance carried out successfully by an individually or group on the completion of a task whether it be academic manual, personal or social. Thus achievements mean all those behavioural changes which take place in the individual as a result of learning experience of various kinds. By achievement we also means proficiency of performance generally measured by standardized task or test. In this study was measured through the marks obtained by the students in their different tests Maths, Science and S. studies.

2. **Locus of Control**

Locus of control means expectancy variable that describe the perception of the personal control that one has ever the reinforcement that follow his behaviour. It has two types External and Internal.

1. **External Locus of Control** – Individual believes that his/ her behaviour is guided by fate, luck or other external circumstances.

2. **Internal Locus of Control**- Individual believes that his/ her behaviour is guided by his/ her personal decisions and efforts.

**Samajik Pratikriya Suchi:**

This scale has been used to obtain Locus of Control Scores the scale can be administered in groups also this Hindi version of Rotter’s Internal – External scale contains forced 30 items & each item has two statements (a) & (b) and the respondent is required to choose either (a) or (b) i.e. which is more true to him scoring involves assigning one mark & keyed (extremely statement was checked. Every subject Locus of Control
score is obtained thus, by adopting up his marks over all the keyed items
(A copy of the scale is enclosed in appendix)

**Indian Adaptation of Cattle’s Motivation Analysis test.**

The motivation analysis test (Hence forth Mat ) is used in education notably in selection and guidance, in psychological clinics, and in Industrial personnel work, originally it has been prepared by R. B Cattell, J. L Horn and A.B Sweney but its Indian adaptation has been prepared by S. D Kapoor and S.N Singh. It penetrates that hitherto neglected region-beyond ability measurement and beyond personality. Temperament qualities-called dynamic measurement. This covers a person’s interest, drives and the strength of his sentiment and value system combine with ability and general personality measures.

This test can be administered in group are individual. It normally needs less than and an hour of testing. This test offers to fundamental advances on most previous interest or motivation tests. First, it concentrates on ten psychologically-meaningful unitary motivation systems, established by comprehensive and objective factor analytic research. Secondly, it uses newly-validated objective test devices for measuring their interest strength. These new development get away from the drawbacks of the deliberate backing, or personal illusion, and of superficiality of measurement which, uptill now have vitiated most “Projective” and opinionaire methods emplied in interest batteries.

This test measures ten dynamic structure of human personality known as Ergs and Sentiments. Five dynamic structures like mating, Assertiveness, Fear, Narcism and Pugnacity from the ergs while the rest of five dynamic structures like self sentiments, super-ego, carrier, sweet-heart and home from the sentiments.
The validity and reliability of each factor has been determined by authors in the manner that can be briefly outlined as follows, first, each of the factor has been discovered as unitary dynamic structure, existing in typical individuals in our culture than its pattern has been experimentally replicated as clear cut entity, across several researches on people of different age and background.

Scales have than been setup, using the four or more best objective devices designed to measure each of the given factor with the highest possible validity and reliability. The reliability and validity of every factor ergs and sentiments are shown in table, a copy of booklet of the mat and its answer sheet appended in appendices B and C respectively.

**Social Familial Factors:-**

- The term Social – Familial Factors used in the present investigation includes parental occupation, father or guardians education, parents or guardians education, parents or guardians monthly income, qualification of father nor mother, size of the family, brother & sisters, the measurement of which should be possible through social familial factor questionnaire prepared by the investigator.

**3.5 ADMINISTRATION OF THE TOOLS**

- The investigator Administered the tests in high & higher secondary schools of Jammu & Kathua Districts comprising Different Tehsils & Zones of the District.

- First of all the investigator met the heads of the institutions objectives & significance of the Topic were discussed with them. Then, with their permission & co-operation of the Teachers, tests were administered according to the guide lines of the tests contained in the respective manuals.
In the present investigation the investigator visited the selected school personally for administration of the Tools. The aim of personally going to the schools was that the personal presence of the investigator would satisfy the curiosity of students as to who the investigator is and also the purpose of the study could be explain to the students in order to ensure the reliable responses. At the time of actual administration of the tests, necessary steps were adopted to control and minimize the cheating tendency of the students. They were assured that their responses will be kept confidential and therefore, they should be frank, bold and sincere in answering the questions.

Data was collected in two phases at the first phase first of all the investigator identified the Scheduled-caste students in class 9th and 10th of that School and then approximately non-scheduled caste were taken for administering the tools. In the first phase two test viz intelligence and Locus of control were given to the students. In second phase t – tests (Maths, Gen Science and Social Studies) were given to the students in the third phase Cattell’s motivation analysis test were administered and in the fourth phase a test construct by the investigators herself for Social familial factor were administered on the same sample.

3.6 SCORING OF TOOLS

1. Scoring of intelligence-

   Joshi’s humanities group test of general mental ability.

   The Test (Humanities Group of mental ability) considered of 100 questions, which were supposed to test seven elements viz, synonyms, Antnyms, number series, Classification, Best Answer reasoning & Analogies. For every correct answer one mash was given to that particular question and likewise same scoring procedure was followed for
the rest of the 100 items in the Tool. The scoring keys of the intelligence test is appended in the appendices.

2. Scoring of Locus of Control.

Samajik Pratikriya Suchi

This scale has been used to obtain Locus of Control Scores the scale can be administered in groups also this Hindi version of Rotter’s Internal – External scale contains forced 30 items & each item has two statements (a) & (b) and the respondent is required to choose either (a) or (b) i.e. which is more true to him scoring involves assigning one mark & keyed (extremely statement was checked. Every subject Locus of Control score is obtained thus, by adopting up his marks over all the keyed items (A copy of the scale is enclosed in appendix)

3. Scoring of Academic Achievement:-

The achievement test in mathematics, social science and general science were scored with the help of their scoring keys prepared by their makers one mark was awarded to the correct response while zero to the wrong one. The scoring keys for the test in (Mathematics, Social Science and Gen. Science) are appended in the appendices.

4. Scoring of Mat

Each examine was provided with a single answer – sheet. It preserves on the side, I a record of responses of the two unmitigated sub tests and on the other labeled side & of the Two integrated sub - tests. The spacing of item responses in IBM pattern to permit use of equivalent IBM score sheets the scoring of these answer sheets was done by the investigator by using four stencil scoring keys prepared by IPAT staff. Each side of the answer sheet could be scored with the help of two stencil scoring keys on the scoring keys labeled U1 and U2 were prescribed for
side one and similarly 1 and 12 were meant for side two of the answer sheet. In each pair, the U1 and 1.1 keys were designed specially to handle the columns only of the “Paired answer” sub-tests (Paired words and uses).

In which one answer of each pair contributes to one factor and which the second Alternative (rows) to another distinct factor, making a single key impossible the way to use these stencil keys is fully stated on the keys themselves. It takes only about a minute or two to affix it and to write down in the columns on the right of the answer sheet the raw scores derived from it thus, the whole answer sheet (both side) could be scored in two to four minutes.

Finally the investigator added both the unintegrated and integrated scores obtained from all the four subjects that is uses and estimates of pairs of words & information of the motivation Analysis Test for the scoring keys of Mat are appended as having the final scores as Appendix.

5. Scoring of Social familial Factors

The investigator used the self prepared test for social familial factor which comprises certain questions and the students have to put a (√) on the most appropriate answer. The copy of the questionnaire appended in the appendices.

The scoring keys for intelligence, Locus of Control, Academic achievement, (Maths, Social sciences & General science) social familial factor are appended in appendices.

3.7 STATISTICAL TECHNIQUES EMPLOYED:

For the analysis of data the investigator employed the following statistical techniques.

1. Mean, SD
2. Pearson product - movement correlation
3. t-ratio