CHAPTER – 3

METHODOLOGY

3.1 INTRODUCTION :

In this chapter tools and techniques of data collection and procedure followed to conduct the study are discussed. They include

i) Sampling procedure.

ii) Tools used for data collection.

iii) The procedure of administering and scoring of the test.

iv) The statistical techniques employed for analysing the data.

3.2 SAMPLE :

In present study, population under investigation was the elementry students of class VIII. The sample was drawn from six schools, of New Bhopal and adjacent rural area of New Bhopal.

Method of Selection :

Various techniques were available for obtaining a sample which would be representative of pupulation. Whether a sample is free from bias or not depends upon our knowledge of the pupulation as well as upon the methods used in drawing the sample. Methods fall under four headings, random, stratified or quota, incidental and purposive. Keeping in view the nature of the problem and

population under investigation, availability and suitability with convenience of the purpose, the schools were selected by incident Sampling techniques and the sample of 203 students were selected randomly.

Size of the Sample :

In order to study the gender variable the sample included five co-ed. schools and one girls school. The list of schools and number of students included in the sample gender, area, category wise given in the table no. 3.1 and 3.2.

Table 3.1

List of Schools (Urban Area)

Name of School	Male		Female		Total
	General	Disadvan-taged	General	Disadvan-taged	
1. Model High,Secondary School	23	04	09	--	36
2. Govt Kasturba Girls High.Sec. School	--	--	17	11	28
3. Govt. Middle School	03	19	04	16	42

Table 3.2

List of Schools (Rural Area)

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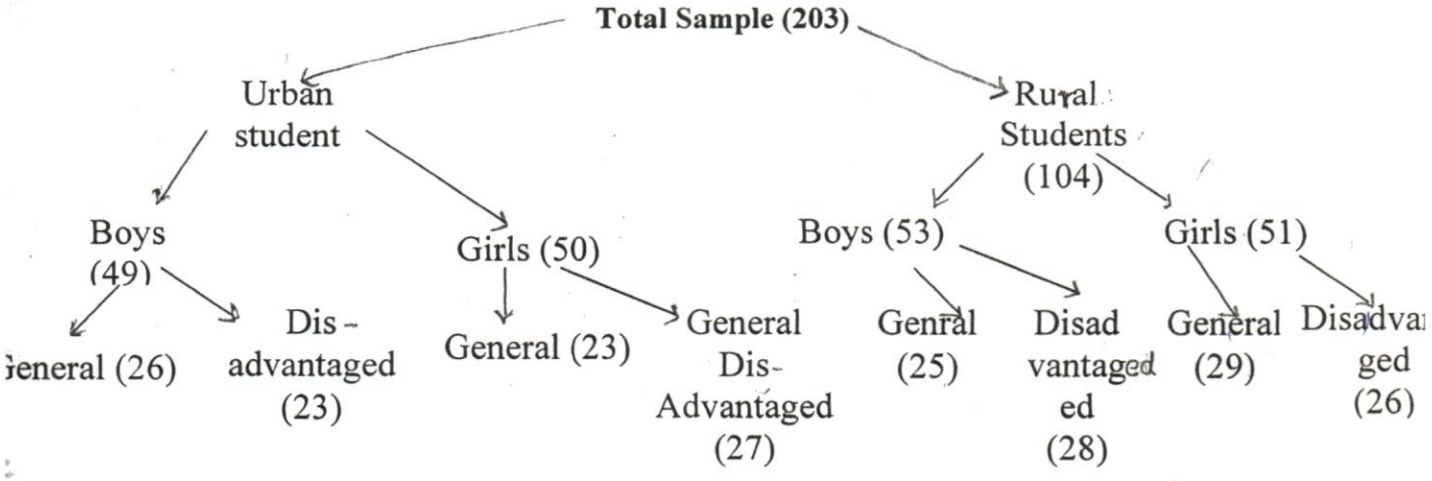
List of Schools (Rural Area)

Name of School	Male		Female		Total
	General	Disadvan-Taged	General	Disadvan-taged	
1. Govt. Middle School Bairagarh Chichli	10	10	11	09	40
2. Govt. High. Sec. School	02	11	02	11	26
3. Govt. Middle School Adampur Chhawani	13	07	11	06	36

Details of the sample



3.3 DISCRIPTION OF THE TOOL USED :

To study the achievement-motivation of pupils, Deo-Mohan Achievement-Motivation (n-ach) scale was used.

Pratibha Deo and Asha-Mohan's achievement-motivation test (1985) :

This test was used for the collection of data regarding the variable n-achievement. The study of motivation gained importance since early fifties with

the efforts of McClelland and his associates at Wesleyan University, USA. Achievement- Motivation is aquired tendency and is one of the most imporant social needs. It has been defined by McClelland and his associates (1953) as "disposition to strive for success in competition with others with some standered of excellence set by the individual."

The need to develop this scale was felt mainly for three reasons. Firstly, a projective tests generally used for measuring administration and the scoring procedure is some what complicated. Quite often a researcher requires a quick scoring tool which can be easily administered and used for research or studying pupils. Achievement motivation is a variable which is used in many studies in education either as a main or secondary variable or a moder ator variable. The purpose of preparing this scale is to be handy and convinient for administration and scoring. Secondly a standered verbal measure which sufficiently measures the achievement motivation in generally desired. The present scale is built to fulfil that need. Thirdly for validating the projective test of achievement motivation the verbal scale was found to be a very useful and valuable instrument. The items in the scale were based on following factors.

i) Academic factor

ii) Factor of general interest

iii) Factor of social interest.

There were 50 items among them 37 were positive and 13 negative.

The test was translated by researcher in Hindi language so that it was easy for rural group. It was first discussed with the classmates of M.Ed. course, then it was consulted with teachers and modified according.

The 50 items are distributed as followes in the given table.

Tabe 3.3

Sr.No.	Factors	No. of Items
1.	Academic Motivation	4
2.	Need for achievement	4
3.	Academic Challenge	4
4.	Academic Anxiety	1
5.	Importance of Grades/marks	2
6.	Meaningfulness of tasks	4
7.	Relevance of school in future goals	2
8.	Attitude towards education	4
9.	Work methods	5
10.	Attitude towards teachers	3
11.	Interpersonal Relations	4
12.	Individual Concern	2
13.	General Interest	4
14.	Dramatics	2
15.	Sports etc.	5

Reliability of the Scale :

Test method was applied to obtain the reliability co-efficient of the scale. Taking different sets of sample, the adminsitration of the scale was repeated on several occassions. The results are given below :

Table 3.4

Sample	N	Interval	ϒ	Significant
Mixed Group	51	4 Weeks	.69	.01
Males	33	5 – 6 Weeks	.67	.01
Females	50	5 – 6 Weeks	.78	.01

These co-efficient of reliability are sufficiently high and the scale can be considered as reliable for use.

Validity of the Scale :

As the validity of the scale is concerned, in the first instance the item validity established by the high low descrimination method was accepted as the validity of the whole measure. Besides, this scale was also used for validating the projective test of achievement motivation the coefficient of correlation between the scale and the projective test was observed to be, 0.04 which speaks for the validity of the scales, the validity being of the concurrent nature.

3.4 Data Collection :

After selecting the required tool discussed earlier, information was collected regarding dependent and independent variables.

The above mentioned test was administered carefully according to the instructions laid down in the manual of the test. Special care was taken to encourage full interest, enthusiasm and frankness among students, while performing the test. Their difficulties in understanding the items were invited and removed before proceedings for administration. The test was administered in one sitting to groups of students of a class. The students were throroughly explained as to what they were expected to do.

After administering the test, the scoring was done using two stensil keys. One for positive item carries the weights of 4,3,2,1 and 0, respectively for the categories as always, frequently, sometimes, rarely and never (as given in five point rating scales.) The negative item is to be scored 0, 1, 2, 3 and 4 for the categories given earlier. The total score is summation of all the positve and negative items scores. The maximum scores obtained can be 200 and the minimum can be zero. Five answersheets were left because of they were incomplete.

3.5 STATISTICAL PROCEDURE :

For the analysis of data following statistical techniques were employed.

Mean (M) and Standered Deviation (SD)

Means and standered deviations were calculated in case of distribution of scores on achievement motivation test in case of rural, urban, students genderwise.

The formula used are as follows :

(i) $M = AM + (\Sigma fd/N)CI$

(ii) $SD = \sqrt{\Sigma fd^2/N + (\Sigma fd/N)^2}$

Where :

AM = Assumed Mean

CI = Class Interval

D = Deviations from AM in terms of class interval

f = Frequencies

N = Total number of scores

Test of Significance of Difference between means :

To determine the relationship between achievement motivation and gender also achievement –motivation among various groups, the test of significance of difference between means was used.

Two different formulae were used for two different groups depending upon the sample size.

They were as follows :

i) **For 'N' more than 30, the technique employed was that of critical ratio (CR).**

The formula employed for the calculation of CR was as follows :

$CR = D/SE_D$

Where :

D = M1 – M2 or difference between two means

SE_D = The standered error of the difference between the means.

The fomula for calculation of SED was

$SE_D = \sqrt{SD12/N1 + SD22/N2}$

Where : SD1 and SD2 are the values of the standered deviation of two samples.

N1 = number of cases in first sample

N2 = number of cases in second samples.

(ii) For sample or 'N' less than 30, the formula employed was as follows :

$t = M1 - M2/SE_D$

Where :

SE_D = Standered error of the difference between means.

SED = SD' N1 + N2/N1 x N2

$$SD' = \sqrt{\frac{\sigma_1^2 \times df_1 + \sigma_1^2 \times df_2}{df_1 + df_2}}$$

Where :

σ_1, σ_2 are the standered deviations of two sample.

df_1 and df_2 are their respective degree of freedom.