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CHAPTER IV

DESIGN OF THE STUDY AND PROCEDURE

This chapter is divided into two parts, the first part deals with the design of the study and the second part describes the general procedure.

PART I

DESIGN OF THE STUDY

The main purpose of the study was to determine the relationship between criterion (attitude towards school) and the predictors (interest pattern, self-concept, adjustment and scholastic achievement) variables. For this purpose the correlational method of descriptive research has been followed. This part of the chapter deals with the design followed to conduct the investigation pertaining to the relationship between criterion variable and predictor variables. The aim of the investigation was also:

(i) to study the differences between groups having high interest and low interest on the criterion of attitude towards school.

(ii) to study the differences between groups having high and low self-concept on the criterion of attitude towards school.
(iii) to study the differences between groups having high and low adjustment on the criterion of attitude towards school.

(iv) to study the differences between high and low achievers on the criterion of attitude towards school.

(v) to study the differences between boys and girls on the criterion of attitude towards school.

(vi) to study the differences between urban and rural pupils on the criterion of attitude towards school.

In this study the researcher carried out the investigation on school pupils. He planned a design to find out whether the outcome was the same as stated in the hypothesis.

4.1 METHODOLOGY

In descriptive research, correlational studies are often used for determining the extent of relationship existing between variables. The methodology enables a researcher to ascertain the extent to which variation in one variable are associated with variations in another. The magnitude of the relationship is determined thorough the use of the coefficient of correlation.

Multiple regression is one of the most frequently used techniques of analysing data in behavioural research. Kerlinger
and Pedhazur (1973) have defined multiple regression as a method of analysing the collective and separate contributions of two or more independent variables (predictor variable) to the variation of a dependent variable (the criterion). It takes into consideration the covariation between a set of independent variables with a dependent variable. One of the important aims of multiple regression analysis in correlational methodology is prediction. The objective of this research is to know to what extent attitude towards school can be predicted on the basis of concomitant variables like self-concept, interest pattern, adjustment and scholastic achievement. Thus the methodology of descriptive research has been followed in this investigation.

4.2 POPULATION:

Pupils of class IX belonging to urban and rural areas (excluding industrial and metropolitan areas) of the districts North 24-Parganas and Nadia in West Bengal and studying in schools under the West Bengal Board of Secondary Education having Bengali as the medium of instruction formed the population of this investigation. The population of school pupils may be categorised as urban or rural. The urban or rural pupils on the basis of the schools to which they belong may be further stratified as the pupils of either co-educational, or boys or girls school.
The sample consists of 400 pupils of class IX (both boys and girls) taken from Boys', Girls' and Co-educational schools from the urban and rural areas of the districts of North 24-Parganas and Nadia.

The process of sampling was performed as follows:

The researcher first prepared a list of districts (sixteen districts) in the State of West Bengal. Through randomization he selected two districts viz. North 24-Parganas and Nadia. The records of District Inspector of Schools were consulted to find the distribution of schools (boys', girls' and co-educational) in the population. It was found that the above type of schools were distributed in the urban area of the population as follows: Boys-2, Girls-2 and co-educational-1. Similarly, the distribution of schools in the rural areas were as follows: Boys-1, Girls-1, co-educational-3. The selection of schools in urban and rural areas for the purpose of proportional allocation in stratified random sampling has been shown in table no.4.1.
Now in employing stratified random sampling technique, one divides the population in strata by some characteristics and from each of these smaller homogeneous groups (like urban boys, rural co-educational) draws at random a pre-determined number of units. Hence the researcher selected at random the number of pupils from each of these homogeneous groups to get the final sample. The sampling units were the individual pupils and the units were thus selected at random from each stratum in proportion to the actual size of the stratum in the population.

Hence, random selection of pupils from different strata was in proportion to the total number of sampling units in
the strata. The stratification factor was, however, educational background (pupils of class IX) and residence (urban and rural).

The details of the sample selected from boys, girls and co-educational schools are given in table-4.2.

### TABLE-4.2

**DESCRIPTION OF THE SAMPLES FROM SCHOOLS**

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Name of the Schools</th>
<th>Types of School</th>
<th>Urban or Rural</th>
<th>Class and Section</th>
<th>No. of pupils after random selection</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Annulia High School</td>
<td>Co-ed. Rural</td>
<td>IX</td>
<td>A</td>
<td>58</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>B</td>
<td>51</td>
</tr>
<tr>
<td>2.</td>
<td>Purnenager High School</td>
<td>Co-ed. Rural</td>
<td>IX</td>
<td>A</td>
<td>75</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>B</td>
<td>46</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>B</td>
<td>46</td>
</tr>
<tr>
<td>4.</td>
<td>Haripade Institution</td>
<td>Boys Rural</td>
<td>IX</td>
<td>A</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>B</td>
<td>24</td>
</tr>
<tr>
<td>5.</td>
<td>Giribala Balika Vidyalaya</td>
<td>Girls Rural</td>
<td>IX</td>
<td>A</td>
<td>48</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>B</td>
<td>31</td>
</tr>
</tbody>
</table>

(Continued)
Table-4.2 (Contd.)

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Name of the Schools</th>
<th>Type of School</th>
<th>Urban or Rural Section</th>
<th>Class and No. of pupils</th>
<th>No. of pupils after random selection</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.</td>
<td>Purbaechal Bidyapith</td>
<td>Boys</td>
<td>Urban IX</td>
<td>A</td>
<td>43</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>B</td>
<td>39</td>
</tr>
<tr>
<td>7.</td>
<td>Nandannagar High School</td>
<td>Boys</td>
<td>Urban IX</td>
<td>A</td>
<td>47</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>B</td>
<td>39</td>
</tr>
<tr>
<td>8.</td>
<td>Debnath Institution</td>
<td>Girls</td>
<td>Urban IX</td>
<td>A</td>
<td>35</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>B</td>
<td>49</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>B</td>
<td>54</td>
</tr>
<tr>
<td>10.</td>
<td>Adarsha Siksha Niketan</td>
<td>Co-ed</td>
<td>Urban IX</td>
<td>A</td>
<td>53</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>B</td>
<td>56</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Boys</td>
<td></td>
<td></td>
<td></td>
<td>471</td>
</tr>
<tr>
<td></td>
<td>Girls</td>
<td></td>
<td></td>
<td></td>
<td>468</td>
</tr>
</tbody>
</table>

In co-education school

A = Boys Section
B = Girls Section

From table-4.2, it may be observed that out of 939 pupils (471 boys, 468 girls) only 400 pupils were included in the sample,
because of the random assignment of the pupils from each stratum. Tests were administered on this sample of 400 pupils only.

An attempt was made to note down the age of the pupils and it was found to be within the range from 14 to 16 years. Thus the sample was representative of the pupils of class IX in West Bengal.

4.4 INSTRUMENTS:

The present study required methods of assessing attitude towards school, interest pattern, self-concept, adjustment and scholastic achievement of individual pupils. After reviewing the different tests that could be used on the population selected, particularly for the learners having Bengali as the medium of instruction, it was observed that a standardized tests interest pattern, self-concept and adjustment were available. As no other suitable tools were available for measuring the attitude towards school and the scholastic achievement of the pupils of class IX, reading under West Bengal Board of Secondary Education having Bengali as the medium of instruction, it was found necessary to develop (i) attitude towards school scale and (ii) the scholastic achievement test.

Finally, it was decided to use the following tools:

(i) 'Attitude Towards School Scale', a Likert type
attitude scale constructed and standardized by the researcher to measure the attitude towards school of the sample under investigation.

(ii) Chatterji's 'Non-Language Preference Record (CNPR) 962', developed by Chatterji (1972)\textsuperscript{2} to measure the interest pattern of the sample under consideration.

(iii) 'Atma Bodh Nirnayak (ABN)' a test developed by Basu (1980)\textsuperscript{3} to measure the self-concepts of the sample under consideration.

(iv) 'Beller Sangatibidhan Presnaduchha' (Bengali version of Bell's Adjustment Inventory 1986)\textsuperscript{4} adapted and standardized by the researcher in collaboration with Basu to measure the adjustment pattern of the sample under consideration.

(v) 'Scholastic Achievement Test (SAT)' was developed and standardized by the researcher to measure the scholastic achievement of the sample under consideration.

4.5 **STATISTICAL METHOD**

Having measured quantitatively the variables like attitude towards school, interest pattern, self-concept, adjustment and
scholastic achievement of the pupils, it was found necessary to determine the interrelationship among the variables i.e. to test each of the hypothesis by calculating the product moment correlation coefficient and framing the inter-correlation matrix.

An estimate of the criterion measure which is based on the linear combination of several independent measures was obtained through what is known as 'Multiple Regression Equation', given by

$$ Y = \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \beta_4 x_4 \ldots \ldots \ldots $$

where, the beta multiplier of the independent variables are computed to maximise the prediction of the dependent variable.

Thus, in this study attitude towards school may be predicted from a linear combination of interest pattern ($x_1$), self-concept ($x_2$), adjustment ($x_3$) and Scholastic Achievement ($x_4$). The beta coefficients, however, may be estimated through the Aitken method of pivotal condensation.
PART - II

PROCEDURE

The procedure of the administration of the different instruments in schools has been detailed below:

4.6 ADMINISTRATION OF THE ATTITUDE TOWARDS SCHOOL SCALE:

The Attitude towards School scale, was administered by the researcher in actual classroom condition. Before giving the test booklets to the respondent the following brief instructions were given:

There are 70 statements about attitude towards school and against each statement there are boxes, each of which belong to the categories like A, B, C, D, E. In order to express your attitude regarding a statement correctly you should indicate by a tick mark in the box corresponding to the category (A, B, C, D or E) which you will select, depending on the degree of your agreement with one of the categories such as Strongly agree A; Agree B; Undecided C; Disagree D; or Strongly disagree E; with the statement.

You should put only a single tick mark in the category you have considered appropriate for you in respect of certain statement.

Your responses will be kept strictly confidential. So without any hesitation you should frankly express your attitude by putting the tick mark in the appropriate place.

The attitude scale was administered upon the sample of 400 class IX pupils belonging to 10 secondary schools during the month of March and April, 1987. In each school the
researcher took two class periods (35 minutes each) for the administration of the scale.

4.7 **ADMINISTRATION OF CNPR**

Chatterji's Non-Language Preference Record (CNPR) Form 962, a test to measure the interest pattern was administered by the researcher in the schools in the month of July, 1987. The test was administered in a class-room condition taking one section at a time. Thus he took ten days and on each day two class periods were taken for the administration of the test. The testees took about 40 to 45 minutes to complete their responses on the test. The testees were given a copy of CNPR and answer sheet, and were asked to read the direction. Considering that some testees were not familiar with the objective inventory, the researcher read the direction loudly. When it was clear that each one of them has understood the direction they were asked to indicate their preferences on the answer sheet by putting a cross (X) marks in the appropriate places. They were also asked not to write anything on the booklet. They were directed to understand the pictures themselves or to guess if they were not quite sure. They were encouraged to answer all the items. A quiet friendly and nontense atmosphere was created and maintain in the classroom for convincing them that they were not appearing in any school examination. As the most important thing in this test was to make each testee aware of
what he is to do and how he is to indicate his responses, the researcher tried to keep an eye over each testees' answer sheet. In fact, he tried to ensure that each testee was making his responses sincerely in accordance with the directions given. In a few cases, the researcher felt the necessity of explaining quietly the way to indicate the responses.

4.8 ADMINISTRATION OF ABN:

The Self-concept test (ABN) was administered by the researcher in a classroom condition in each school. The administration of the test was carried out in the month of August, 1987. The researcher took 40 minutes for administering the test in one section of class IX in each school. Since in each school there were two sections, he took 80 minutes in each school for the administration of the test. Before starting the administration of the test the following instructions were given in Bengali verbally,

"This test is not measuring your progress in school subjects. Therefore, there is no right or wrong answer of each item. So the practice of copying your fellow class mate who is sitting by your side will not help you in any way. It will be in your interest to be honest in answering the items. Your honest attempt will help you in knowing your self-concept. Your responses will be kept secret. It will not be made known to others".

Having given these instructions to the pupils the test (ABN) along with answer sheet was distributed to the students
and they were directed to read the instructions given in the beginning of the test. While they were reading the instructions they were told that they should put the tick (√) mark in the appropriate places in the answer sheet, specially prepared for this purpose. On the completion of reading the instructions they were asked to read each statement very carefully and respond to it after properly weighing it with the existing concept of the self. There was no time limit but in each class in a school it was found that the students responded to the whole of the test within 40 minutes. The administration of the test in the 10 schools required ten days. The students were very much enthusiastic in knowing their self-concept and so there was spontaneous cooperation from the pupils.

4.9 ADMINISTRATION OF ADJUSTMENT INVENTORY

The adopted Bengali version of the Bell Adjustment Inventory (1962) Student Form was administered by the researcher in the actual classroom condition in each school during the month of August, 1987. In order to ensure the careful reading of the direction given on the first page of the inventory the researcher read the directions aloud and directed the pupils to read them silently.

There was no fixed time limit but the pupils were advised to answer rapidly. Usually 90 minutes were required by
most of the pupils for responding to all the 200 items in the test. Each individual pupil being tested was directed to interpret the statements for himself. However, clarification about the meaning of word(s) in the statements, if necessary, were made by the test administrator.

The test administrator tried to seek co-operation from all the pupils. They were told that their scores would be kept confidential.

It was decided that nothing need be said unless pupils ask as to why the letters a, b, c, d, e and f were placed before the questions. In the event of a question being raised, it was also decided that the test administrator should state that they were used in summarising the test results.

Before collecting the test materials the pupils were reminded to write their names and other information on the answer sheet.

Having given the oral instructions to the pupils the test was distributed to them and they were directed to read the instructions given in the beginning of the test. While they were reading the instructions they were told that they should put the tick mark (√) in the appropriate places in the answer sheet specially prepared for this purpose. They were also told that they should act cautiously while putting the tick. On the
completion of reading the instructions they were asked to read each statement carefully and respond to it after properly weighing it with his or her actual state of adjustment meant by the statement of the inventory. The administration of the test took 10 days taking two periods and extra twenty minutes.

4.10 ADMINISTRATION OF THE SCHOLASTIC ACHIEVEMENT:

The test of scholastic achievement in Bengali was prepared and standardized by the researcher. The test was administered in each section of the 10 schools selected. The pupils took 105 minutes to answer all the items. The test was administered in the month of July-August, 1987. No detail instruction was necessary for this test as the pupils of class IX were very much familiar with such tests. The sitting arrangement of the pupils was such that everyone could answer comfortably.

4.11 COLLECTION OF DATA:

Administration of attitude towards school was done first, followed by the administration of the tests of Interest, Self-concept, Adjustment and Scholastic Achievement. The tests were scored according to the directions given in the respective manuals.
REFERENCES


