CHAPTER-III

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This chapter deals with research design, nature of sample, description of test materials and procedure followed in administering the tests.

3.1 RESEARCH DESIGN :

The most valid and reliable method of scientific investigation is one characterized by observing the effect of experimentally manipulated variables while the extraneous, systematic or relevant variables are under control and other variables possibly introducing errors are minimized, if not totally eliminated. Such a procedure is more popularly known as the experimental method. It is only an experimental method by which the causal relationship between two or more variables can be established. But the application of this method is drastically limited by the great many constraints that are involved in this method. Experimental manipulability of many and complex psychosocial variables is not possible. Many psychosocial variables cannot be presented in their natural form, intensity and saturation in the laboratory conditions that deprives spontaneity and natural operation by its artificiality in the form of controls over many concomitant variables. Thus, a limited aspect of psychological variables alone are capable of being investigated experimentally.

Complex variables that operate in a natural setting alone need to be studied in their proper context. Though such field setting studies do not yield causal factors but they provide the next best level of results by revealing the degrees of correlations among the variables of interest. Such an approach has been called as field study or correlational

research. D'Amato (1979, p.6) describes the correlational research as that in which "the variables under study are not directly (experimentally) manipulated by the researcher. Rather, variation in the variables of interest is achieved by some sort of selection procedure." Cronbach (1957), a prominent adherent of the correlational research, has argued that the correlational technique combined with experimental procedure can be a most powerful instrument to solve difficult research problems. The correlational study is successful in identifying the association among the variables. Upon the discovery of such closely associated variables experimental investigations can be planned on a limited number of variables amen-able to experimental manipulation under controlled conditions.

Although correlational research design has a disadvantage of not being able to free itself from the confounding effect of some variables concomitant with the variables of interest, yet in the absence of an experimental method correlational approach alone yields useful data.

Therefore, in the present research dealing primarily with school environment and self-concept the correlational method appears to be most appropriate.

To answer the main questions and thereby testing the hypotheses stated in Chapter-2. Ex-Post-Facto Research Approach was followed. In this approach without manipulating the independent variables or 'X' variables, the relationships between X and Y variables were studied using multivariate method, viz, multiple regression analysis.

The criterion variable, 'Y' in this research is the scores in examination obtained by the subjects. It is an

index of academic success and also the measure of dependent variable. While employing multiple regression, the dimensions of school environment, viz ; Creative stimulation, Cognitive encouragement, permissiveness, Acceptance, Rejection and Control and the dimensions of self-concept, viz; Physical, Social, Temperamental, Educational, Moral and Intellectual were taken as predictor (X) variables. These variables are the measured independent variables.

Caste religion and sex are the other independent variables manipulated through selection, i.e. type-S independent variables. High Caste Hindus, Scheduled Caste (SC) and Backward (BC) are the three caste variables and Hindus and Muslims (MS) are the two religions variables manipulated through selection inthis research project. Taking males and females served the purpose of type-S sex independent variable in the proposed research.

Extraneous variables, viz ; age, economic condition, educational standard, school and residential backgrounds were controlled over all the groups by group matching technique (D'Amato, 1979). These extraneous variables are either subject relevant (age and educational standard) or situation relevant (economic condition, school and residential background).

Educational standard and economic status will be controlled by selecting the subjects of similar educational standard and economic status across all the groups. All the subjects of this study belonged to rural area and thereby controlling the residential area extraneous variable. An equal number of subject ineachgroup from VIII, IX and X standard of schooling have been selected to control the age extraneous variable.

The sequence relevant variables are not supposed to operate in this research, because it does not seem possible that self-concept questionnairs and school-environment inventory are likely to interact among themselves and thereby precipitate order-or carry-over effects. However, a constant sequence in administration of the tests is to be maintained.

Since the tests used in the present research are reliable and valid psychological measures, the obtained resopnses can be scored objectively and the individual differences are minimized through matched selection of the group of subjects, which fulfils the criterion of minimizing error variance of a good design (cf. Kerlinger, 1986). Therefore, the intrinsic validity of the research design is satisfactorily met.

Thus, the present research is a correlational research, employing ex-post-facto approach in field setting. Independent variables are manipulated through selection, and extraneous variables are controlled through selection of matched groups. Analysis of data to reveal the most prominent predictor of academic success among SC, BC, Muslim and Higher Caste Hindu boys and girls belonging to rural areas by Multiple regression analysis will fulfil the main objective of this research project.

3.2 NATURE OF SAMPLE :

As described in the above section, the subjects of this study are distributed in groups selected from the rural areas of Faizabad district in eastern Uttar Pradesh. The groups are :

Scheduled Caste (SC) Girls
Scheduled Caste (SC) Boys
Backward Caste (BC) Girls

Backward Caste (BC) Boys

Muslim (Ms) Girls

Muslim (Ms) Boys

Upper Caste (UC) Girls

Upper Caste (UC) Boys

In each group there were 100 subjects. Randomized sampling technique will be applied to select the subjects. Girls' groups are the main groups of study while Boys' groups have been selected to compare the characteristic predictors of academic success among girls' groups. The composition of groups alongwith control variables have been presented in Table-1.

Table-1 : Showing the distribution of subjects in each group with regard to different variables that has been controlled.

Variables	Subject of Eight Groups (Sc, BC, MS, UC Girls and Boys)	
Number	100	
Age	13 to 16 years	M = 14 Years
Income	Rs. 1200 to 1800 per month	M = Rs.1500/- per month
Education	8th to 10th standard	
School and Residential Background	Rural	

The sample has been selected in a way to control the extraneous variables. The extraneous variables indentified and controlled were :

Age	*Subject age was ranged from 13 to 16 years.*
Income	*Average income of the family of the subjects was Rs. 1500/- per month.*
Education	*The educational standard of all the subjects were 8th to 10th.*
School Background	*An Equal number of subjects in each group have been selected from each school identified for the research and situated in rural areas.*
Residential Background	*All the subjects were from rural areas, they lived in villages and studied in the schools situated nearby their residences.*

3.3 TOOLS USED FOR THE STUDY :

The following test materials were used in the present study :

3.3.1 School Environment Inventory (SEI) :

Mishra (1984) has developed the SEI. This test has been selected for the present study because it is designed to measure the psycho-social Climate of schools as perceived by pupils which is the main objective of the study. The Inventory provides a measure of the quality and quantity of the cognitive, emotional and social support that has been available to the students during their school life in terms of teacher-pupil interactions. SEI has items in six dimensions of the school environment. The operational definitions of these dimensions are as follows :

A. Creative Stimulation (CRS) : It refers to teachers' activities to provide conditions and opportunities to stimulate creative thinking.

B. Cognitive Encouragement (COE) : It implies teachers' behaviour to stimulate cognitive development of students by encouraging his actions or behaviours.

C. Permissiveness (PER) : It indicates a school climate in which students are provided opportunites to express their views freely and act according to their desires with no interruption from teachers.

D. Acceptance (ACC) : It implies a measure of teachers' unconditional love, recognising that students have the right to express feelings, to uniqueness, and to be autonomous individuals. Teachers accept the feelings of students in a non-threatening manner.

E. Rejection (REJ) : It refers to a school climate in which teachers do not accord recognition to students' right to deviate, act freely and be autonomous persons.

F. Control (CON) : It indicates autocratic atmosphere of the school in which several restrictions ae imposed on students to discipline them.

The Inventory contains 70 items. Twenty items belong to CRS dimension and ten items belong to each of the remaining five dimensions. The split-half reliablity of the dimensions of the inventory has been reported to range from .673 (PER) to .919 (CRS). School environment inventory has been found to possess content validity as measured with the help of views expressed by judges. Criterion related validity could not be established because of the lack of appropriate external criteria.

3.3.2 Self-Concept Questionnaire (SCQ) :

agreement were selected establishing the content and construct validity of the SCQ.

3.4 PROCEDURE :

School environment inventory and self-concept questionnaire are administered in a group of 25 students. This sequence of tests is maintained through out the process of data collection. Data are collected in the morning session of the school to avoid the fatigue among the subjects. All the subjects are tested in undevided group having subject of each caste and religious groups. After collection the subjects' test booklets are allotted to their respective sex, caste and religious groups. We had to collect more data than required for this study because some inappropriate data which did not fit to any of the eight groups were rejected.

The subjects were instructed according to the written instructions on the test booklet. All the subjects are given sufficient time to complete the task. All the subjects are tested in their regular Class-room in which students of different caste, religion and economic status study together.