

CHAPTER IV

METHODOLOGY

## CHAPTER IV

### METHODOLOGY

#### Problem

To Study 'SOME ASPECTS OF PATTERNS AND DETERMINANTS OF HUMAN AGGRESSION'

#### Variables

Most researches on human aggression has been addressed to two sets of variables, which may be labeled as "antecedent" and "outcome" or in common terminology of research we may call them "independent" and "dependent" variables. In the present investigation 'Patterns of human aggressive acts during the 1974 agitation of Gujarat and patterns of responses on P-F study are dependent variables or outcome of frustration situations. Factors concerned with provocation of such responses are antecedent or independent variables and they are the determinant of human aggression. Here 'Frustration' may be called independent variable thus determinant of aggressive acts. However, in a community setting or in a cultural milieu frustration may be due to several complex factors. In an investigation of socio-cultural nature where deductive method is used, it is not always easy to locate all antecedent variables or determinants of frustration and aggression.

In the present investigation determinants were deduced or derived from the observations made and from cultural milieu, and an attempt has been made to establish connection between antecedent and outcome variables both on conceptual as well as empirical grounds. Following are the independent and dependent variables in the present investigation :

<u>Independent variables</u>	<u>Dependent Variables</u>
Frustration (which is due to)	Directions and types of aggression (which are identified as)
a. Physical environment	a. Extraggression
b. Economic conditions	b. Intraggression
c. Political environment	c. Imaggression
d. Socialization process	d. Obstacle-Dominance
e. Communication block	e. Ego-Defence
	f. Need-Persistence

Research Design :

For comparison an experimental group of Gujarati individuals and a control group of non-Gujarati (North Indians) individuals were constructed. Following was the total plan of the investigation :

---

P Observations and Formation of  
H recordings of aggressive hypotheses on the  
A acts manifested during basis of observations  
S the 1974 agitation of made  
E Gujarat  
I

---

P Formation and Testing of the  
H matching of hypotheses by  
A experimental and control administering  
S groups picture - Frustration  
E Experimental Group N Study on both the  
II (Gujarati individuals) 50 Groups  
Control Group  
(North Indians or 50  
non-Gujarati  
Individuals)

---

### Hypotheses

Following hypotheses were formed on the basis of observations recorded in the Phase I of the investigation, for experimental verifications.

#### Hypothesis 1

Gujarati people will have significantly better control over externalisation of their aggressiveness compared with non-Gujarati people.

Hypothesis 2

Gujarati people will significantly turn their aggression inwardly compared with non-Gujarati people.

Hypothesis 3

Gujarati people will significantly evade their aggression in an attempt to gloss over the frustration compared with non-Gujarati people.

Hypothesis 4

Gujarati people will significantly verbalize the obstacle which stands out in their way compared with non-Gujarati people.

Hypothesis 5

Gujarati people will elicit significantly less ego-dominated reactions to frustration compared with non-Gujarati people.

Hypothesis 6

In their reaction to frustration Gujarati people will significantly pursue the goal for solution of the problem despite the obstacles compared with non-Gujarati people.

### Two phases of the present investigation

The present investigation is divided into two phases. The first phase of the investigation is aimed at recording various patterns of human aggressive acts, which took place during the agitation of 1974 in Gujarat. The manifest behavior during this period has been of 'spontaneous nature' and many of the regional and sub-cultural manifestations of aggressive acts during this period also provided the base for the formation of hypotheses for experimental variations in the second phase of the investigation.

The second phase of the investigation is concerned with testing of the hypotheses formed on the basis of available data in phase I. It is done on a selected experimental group of Gujarati individuals and on a matched controlled group of non-Gujarati (North Indians, originally belong to Rajasthan and Uttar Pradesh) individuals through administration of the Indian Adaptation of the Rosenzweig Picture-Frustration Study Adult Form (Pareek et al, 1968).

### Phase I of the investigation

Method It was an unfortunate but 'natural' opportunity available to observe and record the way

people of Gujarat State and specifically of Ahmedabad city expressed their discontent, hatred, resentment and ventilated their pentup emotions during the popular upsurge between the period of January 1, 1974 to March 15, 1974. In the first place naturalistic observation was chosen as a method of investigation because it allowed one to study aggressive and violent behavior in a real life situation and give a richer feel of the phenomenon under investigation. It is realistic also as some aspects of aggressive functioning are simply not open to experimental attack and certainly wars, riots, revolutions and mass agitations are difficult to be studied in the laboratory setting. Using direct observations and newspaper reports as a source of information, the events were classified under different sub-headings ranging from mild form of social protest to the extreme social violence.

#### Phase II of the Investigation :

##### Subject

In the Phase II of the investigation the sample consisted of 50 individuals in experimental group and 50 individuals in control group. The criteria for including the subjects in experimental group was that they should be resident of Gujarat by birth, should be educated at least upto graduation, should be in the age range of 20-30 years and all of

them should be male only. These criteria were chosen deliberately so that subjects of experimental group may resemble, as far as possible, closely with those individuals who actually took part in the 1974 agitation of Gujarat. The criteria for including the subjects in control group were same as of experimental group except the first one. The first criteria chosen for control group was that the subject should not be resident of Gujarat by birth and only those subjects were included in the control group who were not residing in Gujarat more than one year of duration at the time of administration of Picture Frustration Study upon them. These subjects were originally from Rajasthan and Uttar Pradesh and may be called North Indians or Non-Gujarati subjects. Subjects of both the groups were attempted to be matched in terms of age, sex, education, occupation and marital status. It was found that there was no significant difference in the groups on these variables. (See Tables 2,3, 4 and 5).

TABLE 2

NUMBER, MEAN & MEDIAN AGE AND STANDARD DEVIATION OF THE EXPERIMENTAL (GUJARATI) AND CONTROL (NON-GUJARATI) GROUPS OF SUBJECTS

GROUPS	N	M	MDN.	S.D.
Expt.	50	25.52	25.27	3.20
Cont.	50	26.60	25.90	2.66

$t = 1.83; df = 98 \quad P > .05$  (not significant)

The two groups did not differ significantly in Mean age, the  $t$  ratio being not significant ( $P > .05$ ).

TABLE 3

DISTRIBUTION OF EXPERIMENTAL (GUJARATI) & CONTROL (NON-GUJARATI) GROUPS OF SUBJECTS IN TWO EDUCATIONAL LEVELS.

GROUPS	GRADUATION	POST-GRADUATION	TOTAL
Expt.	40	10	50
Cont.	38	12	50
Total	78	22	100

$\chi^2 = .23; df = 1; P > .05$  (not significant)

The above table shows that the Gujarati and non-Gujarati subjects did not differ significantly in the levels of education ( $P > .05$ ).

TABLE 4

DISTRIBUTION OF EXPERIMENTAL (GUJARATI) AND CONTROL GROUPS (NON-GUJARATI) IN FOUR DIFFERENT OCCUPATION CATEGORIES

GROUPS	NO OCCUPATION	STUDIES	SERVICES	BUSINESS	TOTAL
Expt.	9	19	16	6	50
Cont.	13	8	25	4	50
Total	21	27	41	10	100

$$\chi^2 = 7.64; df = 3; P > .05 \text{ (not significant)}$$

The above table shows that the experimental and control groups of subjects did not differ significantly in four occupation categories ( $P > .05$ ).

TABLE 5

DISTRIBUTION OF MARITAL STATUS IN EXPERIMENTAL (GUJARATI) AND CONTROL (NON-GUJARATI) GROUPS OF SUBJECTS

GROUPS	MARRIED	UNMARRIED	TOTAL
Expt.	21	29	50
Cont.	24	26	50
Total	45	55	100

$$\chi^2 = .36; df = 1; P > .05 \text{ (not significant)}$$

The above table shows that the experimental and control groups of subjects did not differ significantly in marital status ( $P > .05$ ).

### Test material

The Indian Adaptation of the Rosenzweig Picture Frustration Study, Adult Form (1968) was used.

For administration, scoring and interpretation Pareek, Devi and Rosenzweig (1968) Manual of the Indian Adaptation of the Rosenzweig Picture-Frustration Study, Adult Form was followed.

### Procedure

Test was administered to all the subjects of both the groups in a batch of 2 to 3 individuals at a time. Appointments were fixed before hand conveniently to subjects for administration of test. After an initial rapport, the P-F Study Booklets were given to subjects. The tester then read the instructions in Hindi or English as the case may be from the cover page. The subjects listened to the tester and also read the instructions themselves. Then the subjects were asked to open the Booklet, examine the first situation and were asked to think of the first reply that the character in the picture might give. They were instructed to write down their responses. At this stage some of the subjects raised some queries which were responded to their satisfaction. Then they were told to proceed with the other pictures similarly and were left to their own.

As it was a group administration no inquiry was made after they completed all the 24 situations.

On the cover page needful information was recorded in the beginning and at the completion of the test. Later on P-F Study protocols were scored and data were transferred on score-sheet for further calculations.

Data analysis and Statistics used:

In the Phase I of the investigation recorded observations of the manifest aggressive behavior during 1974 agitation of Gujarat were classified under six (total nine including sub-headings) patterns ranging from mild form of verbal protest to the extreme social violence.

In the Phase II of the investigation P-F Study protocol of both the groups were scored according to the Manual (Pareek et. al 1968). The 24 items or situations on each P-F protocol were scored under three forms of directions of reaction to frustration such as Extraggression (E-A), Intraggression (I-A), Imaggression (M-A) and also for three types of patterns of reaction to frustration such as obstacle-Dominance (O-D), Ego-Defence (O-D), Need-Persistence (N-P). From the combination of the six inter-related categories there resulted for each item nine possible scoring factors and two variants. However, the

six categories were the basic constructs considered for psychological interpretation. Later on data were transferred on score-sheet to calculate profile and deviation pattern and super-ego patterns.

The data <sup>was</sup> ~~was~~ organised in tables in the form of pairs of means or medians for different categories of reactions and patterns mentioned above; one set of scores for the experimental (Gujarati) group and the another set of scores for the control (non-Gujarati) group.

Since the main idea of the investigation was to compare the reactions of the Gujarati (Experimental) subjects with those of the non-Gujarati (control) subjects with a view to seeing whether there is any significant difference between the reactions of these two groups, to determine the significance of difference between each pair of scores  $t$  test or median test have been employed. A brief description of the  $t$  test and median test will not be out of place here.

The  $t$  test - In general ' $t$  is defined as the ratio of a deviation from the mean or other parameter, in a distribution of sample statistics, to the standard error of that distribution'. (Guilford, 1965, pp.182).

Assuming the two difference to be zero between the groups in respect of the trait measured, the  $t$  was calculated to see how many times of 100, a difference as large as, was obtained could have happened by chance alone. To do this, the difference between the two means for the two groups ( $D$ ) is divided by the Standard Error of that difference ( $SED$ ). The more times  $SED$  went into  $D$ , the wider was the distribution of the differences between the two means.

The application of  $t$  test needed a special table (Table D in Appendix B, Guilford, 1950) wherein a correction was made in terms of the size of the sample. As the experimental group comprised 50 subjects and controlled group too, comprised 50 subjects, the degrees of freedom were  $(N_1 - 1) + (N_2 - 1)$  or 98. (Table D Appendix B, Guilford, 1965) showed that the null hypothesis could be rejected at the 5 percent level of confidence if the  $t$  equalled 1.98 and at 1% level of confidence if  $t$  equalled 2.63. Thus two levels of significance at .05 and .01 were taken for a difference to be considered statistically significant.

The formula used for calculating  $t$  is given below :

$$t = \frac{M_1 - M_2}{SED} \quad \text{whereas}$$

$M_1$  = Mean of the experimental group

$M_2$  = Mean of the controlled group

SED = Standard Error of differences

The Median Test - In some situations computation of mean is not advisable, there we compute median. It is defined as a point, and not as a score on any particular measurement. On some of the super Ego patterns it was computed.

The median test involves finding a common median for the combination of the two samples being compared, as a first step. Next, the numbers of cases above and below the common median are counted in each sample; resulting in a fourfold contingency table. With equal numbers of observations in each sample, Table N in Appendix B, Guilford, 1965), was used for a test of significance without computing chi square. Here also two levels of significance at .05 and .01 were taken for a difference to be considered significant.