CHAPTER III

RESEARCH METHODOLOGY AND PROCEDURE
Man's quest for new discoveries and new dimensions of knowledge is one of the inherent characteristics of his everchanging behaviour. Change in social life, interpersonal relationship and the self oriented perceptions and motives determine the dynamism of human behaviour which looks for new avenues and new goals for adjustment and recognition.

Scientific research in social sciences is of a recent origin as compared to discrete and subjective techniques through which man shaped his social and personal life. In psychology and education the research strategies which were generally based on subjective oriented hypotheses have been discarded in the light of experiments in physics, human biology and above all cultural anthropology. No doubt, that social scientists have yet to attain that precision and objective oriented analysis which scientists in natural sciences have attained, yet a long distance have been covered which have brought the social science researchers for more nearer in drawing inferences based on objectively designed techniques.
In the proposed research, in which the investigator intends to look for the social, psychological and value oriented characteristics of students who have demonstrated violence and activism as compared to those who have been law abiding, an attempt has been made to make the proposed study more objective and empirical by adopting empirical techniques and thus minimize the chance of subjective errors. It is worthwhile to quote Kerlinger (1973) who has expressed his concern in relation to the objectivism and inferential analysis as the two important postulates of a research programme.

".... Research design sets up the framework for "adequate" tests of the relations among variables. Design tell us in a sense what observations to make, how to make them, and how to analyse the quantitative representation of the observations... A design tells us what type statistical analysis to use. Finally, an adequate design outlines possible conclusions to be drawn from the statistical analysis."

(P.301)

Similarly van Dalen (1973) has equally drawn the attention of researcher towards the appropriate framework of procedural techniques to be adopted in a research design.

"An investigator does not tackle one step at a time, complete that process, and then move on to the next step. He may tackle the steps out of order, shuffle back and forth between steps or work on two steps more or less simultaneously".

(P.14)
There are many other references which support that an unsystematic or ill designed research programme will only lead to blind alleys which are construed with sufficient error and faulty inferences (Monroe, 1952; Morily, 1964; Louis, 1967 and Best, 1978). Therefore, it is of paramount importance that a researcher, before embarking on any research design looks into it from various angles as are involved in the chosen problem. In view of the scientific observations the present investigator decided to make a thorough analysis of the objectives under investigation and the expected inferences to be drawn on the basis of cause-and-effect relationship.

Description of the tools:

If the purpose of research is to re-define, re-establish, discover, or invent a new set of knowledge, it is pertinent to note that the procedure and the tools should provide an optimum level of confidence for the direction and steps adopted by an investigator/investigators. In this way the selection of tools imposes a high premium on the outcome of knowledge. If the tools are devoid of any precision, accuracy and relevance, the researcher is bound to land into blind alleys and come out with faulty
inferences. Keeping such limitations in view and that too in behavioural analysis, a researcher has to look for such procedural techniques and tools that answer his hunches and hypotheses as objectively as possible. Obviously then a number of variables need to be analysed. It is not possible that one single tool or device will work as a panacea and help in resolving all the objects under investigation. A competent investigator therefore, looks into the possible measures which can help him in arriving at the desired results. Accordingly the present investigator made an intensive study of various tools as mentioned in the sixth Mental Measurement Year book by Buros (1965), and the First Mental Measurement year book by Long and Mehta (1966). Besides these two encyclopaedic volumes in the field of psychological tests, the survey of related literature also helped the investigator in choosing the relevant tests and techniques for the collection of required information. In this way the following tools and techniques were adopted for the collection of data.

(i) **Lidhoos Delinquency proneness scale**:

L.D. proneness scale has been developed with a view to apprehend potential delinquents among adolescent
boys in the age range of 14-19 years. The preliminary questionnaire consists of 400 statements, which was developed after an intensive interview with 60 established delinquents, was administered to 60 delinquents and 60 non-delinquents. Item analysis with the help of bi-serial correlation was computed and items significant at one percent level were retained for the final inventory.

In this way there are 35 statements in the area of family, 26 statements in dependence/independence, 26 statements in emotionality and 28 statements in sex. The total number of statements in the final inventory is 113.

This inventory was administered to 200 delinquents and 200 non-delinquents. Reliability and validity were established for each sub-scale and for the total inventory. For reliability of sub scales, Guder-Rachardson formula 20 was used. With the help of this formula the reliability coefficient are as:

1. Family rtt = .824
2. Dependence/Independence = .719
3. Sex rtt = .771
4. Emotionality rtt = .836
The composite reliability of the inventory was established by Mosier's (1943) formula and rss i.e. (total reliability) was found to be .919.

For the test of validity different methods were adopted:

1. A two year follow-up study of extreme cases.
2. Point Bi-serial r.
3. Test of significance of mean differences.
4. Correlation of inventory with teacher comment checklist. By the method of Bi-serial correlation the validity of the inventory was found to be .663.

With the help of test of significance the mean differences between 200 delinquents and 200 non-delinquents in the four sub-scales were found to be significant at one percent level. The 't' ratios are:

1. Family 17.4
2. Dependence/Independence 6.6
3. Sex 7.5
4. Emotionality 16.4

Classification of delinquents and non-delinquents:

Subjects whose mean score is 64.5 and above need
immediate attention as they are considered to be potential delinquents. Subjects with the mean score of 50 and below have been found to be socially normal and law abiding. A subject can answer the statements in "Yes" or "No" if the statement has been ticked for "yes" one mark is to be assigned and if the statement has been ticked for "No" zero mark is to be assigned. Thus the total score of a subject will be summation of all the "Yes" statements ticked by the subject. The order of statements in the inventory is (1) Family (2) Dependence/Independence (3) Sex (4) Emotionality.

The statements in the final inventory have been distributed such that no two statements of the same area follow each other except the last eight statements which represent family area. Dependence/Independence refers to consistent attitude of the subject. If he always confronts himself with the law he is a social rebel and by and large if the attitude of the subject is in conformity with the law he is socially dependent.

Though this inventory has been basically designed for the prediction of potential delinquents within the age range of 14 to 19 years, it has significantly offered some clues towards the acting-out behaviour of student activism.
It has been also established that most of the student activists either for fun or for self assertion follow a path of violence and confrontation and this streak of behaviour is equally common among delinquents or the social rebels. It is with these considerations that LD proness scale was included as a sensitive tool in helping to discriminate between the student activists and non activists.

(ii) M.P.I.(Maudsley Personality Inventory)

For the measurement of the degree of extroversion, introversion and neuroticism, the Maudsley personality Inventory (MPI) developed by J. Eysenck (1959) was used. It consists of 48 questions with trichotomous responses (yes, ? No); 24 items measure each of the two personality dimensions. This inventory has been constructed on the basis of item – analysis and factor–analysis Eysenck (1956). It possesses adequate reliability ranging between, .72 to .90 for both neuroticism and extroversion, Eysenck (1959). This inventory has been validated and correlated with other questionnaires. To quote Eysenck and Eysenck (1969):

"Many correlations have been reported between the scales of the M.P.I. and various existing
questionnaires such as the Cattell scales, the Taylor MAs, and so forth. The results have throughout been very much as one might have expected; thus the M.A.S. and other measures of neuroticism such as those derived from the MMPI give high correlations with the N scale of the M.P.I. ; the same is true of Cattell's anxiety scale and the Guilford D and C scales. The MAS has also slight correlation with introversion while the Guilford R, G and A scales have quite high correlations with extroversion, as does the Cattell extraversion measure and the Si scale of the MMPI".

(P.89)

The scores on neuroticism and extroversion have mostly been found to be independent of each other the correlations between the two sometimes reaching (−.15) for normal samples (Eysenck, 1959). The mean scores on neuroticism and extroversion for normal samples range from 19.89 to 20.91 with a S.D. of 11.0 and from 24.91 to 28.53 with a S.D. of 9.7 respectively (Mohan, 1976).

This test has been used in various studies conducted by Eysenck (1959), Duttetal (1973), Bahadur (1957) and also adapted in many languages by Jalota (1964, 1965) Singh (1966), Rafi (1965) and Dass (1961).

Scoring Procedure:

The test consists of 48 items; 24 items measure
each of the two dimensions of personality viz. extroversion/introversion and neuroticism. Each item has three response alternatives, Yes, ?, No.

24 items which measure the neuroticism dimension of personality, if answered "Yes" are given a weightage of 2 scores. The item Nos. are: 2, 3, 6, 7, 10, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33, 35, 37, 39, 41, 43, 45 and 47.

24 items which measure the extroversion/introversion dimensions of personality are scored as under:

The items Nos. are 1, 4, 5, 8, 9, 12, 20, 26, 28, 32, 34, 38, 42, 44, 46, and 48 are given a weightage of 2 scores, if answered "Yes" and the item Nos. 14, 16, 18, 22, 24, 30, 36 and 40 are given a weightage of 2 scores if answered "No".

The items marked at "?" (in the middle category) are given a weightage of one score. The response directions of correct answers is given in the following table:
The total composite neuroticism or extroversion score is simply the sum of raw scores on all the 24 items in the two dimensions.

Cattell's 16 P.E. Questionnaire:

The review of literature on student unrest provides a good background as regards the tools and tests which have been adopted by various researchers from time to time.
On the basis of operational definitions, which have been given in the foregoing pages, the present investigator found Cattell's 16 PF (for adults) as a suitable tool for assessment of personality characteristics of activist and non-activist students.

Cattell's 16 PF is based on an intensive research of various personality factors which comprise the primary as well as the secondary factors associated with personality and its correlates. It is for the past three decades that the author of the test has devised various factorial devices for screening the factors which reveal the index of one's personality. Cattell followed the analysis of personality correlates as established by his contemporaries like Dreger (1962), Eysenck (1960 a), Guilford (1959), Hall and Lindzey (1957), Macielland (1951) and Vernon (1964). In this way the author has been able to single out a host of personality factors on the basis of which he has developed comprehensive questionnaires for high school boys and girls (HSPQ) for children (CPQ), (ESPQ), (PSPQ) and 16 PF. 16 PF is a coverage of 16 functionally independent and psychologically meaningful factors which have been incorporated in the test. As compared to other tests in
personality, this test offers a wide coverage related to the component factors of personality from the psychological point of view. This test has been developed in simple English and covers 187 statements. For each statement there are three options, in the midst of which a testee is bound to opt for one and only one choice. The author has developed forms 'A' and 'B' for adults and has suggested that either of the two forms can be used for collecting the required information. But, wherever possible both forms 'A' and 'B' may be administered so as to counter-check the results of one form with the other.

The sixteen factors included in the test are 'A' (Sizothymia vs Affectothymia), 'B' (Less intelligent vs More intelligent, 'C' (Lower ego strength vs Higher ego strength), 'E' (Submissiveness vs Dominance), 'F' (Desurgancy vs Surgency), 'G' (Weaker super ego strength vs Stronger super ego strength) 'H' (Thectia vs Parmia), 'I' (Harria vs Premia), 'L' (Alaxia vs Protension) 'M' (Praxernia vs Autia), 'N' (Artlessness vs Shrewdness), 'Q' (Untroubled adequacy vs Guiltproneness), 'Q_1' (Conservatism of Temperament vs Radicalism), 'Q_2' (Group adherence vs self-sufficiency); 'Q_3' (Low-self-sentiment integration vs
High strength of self-sentiment), $Q_4'$ (Low ergic tension vs High ergic tension).

Reliability of the test has been established on the basis of test-retest method and reliability coefficients have been calculated for all the sixteen factors.

As for the validity of the test, this has also been calculated in various forms, such as correlational analysis, construct validity and circumstantial validity. The validity coefficients for each factor have been calculated in three different ways and are given for each factor.

Scoring procedure:

For scoring purposes two cardboard stencil keys for Form 'A' were used. One covering factors A,C,F,H,L,N,Q₁ and $Q_2$ and the other factors B,E,G,I,M,O,Q₂ and $Q_4$. The scoring of all the 100 answer sheets was completed according to the instructions given in the manual.

iv. Study of Values:

This inventory was originally developed by G.W. Allport and P.E. Vernon in an attempt to measure six
predominant all-pervasive attitudes postulated by Fipranger in his book "Types of Men" (1921). The first edition appeared in 1931 and was revised in 1951 with Gardner Lindzey as a new co-author. The main changes which the old form has undergone are:

(i) Simplification of wording
(ii) Modernization of certain items
(iii) An improvement in the diagnostic power of the items
(iv) A more economical scoring scale
(v) Fresh norms
(vi) Redefinition of the social value
(vii) Increase in the reliability of the test as a whole.

The Fipranger attitudes, as redefined by Allport and Vernon (1951) are as follows:

Theoretical

"The dominant interest of the theoretical man is the discovery of truth. In the pursuit of this goal he characteristically takes a "cognitive" attitude, one that looks for identities and differences; one that divests itself of judgements regarding the beauty or utility of objects, seeks only to observe and to reason. Since the interests of the theoretical
man are empirical, critical and rational, he is necessarily an intellectualist, frequently a scientist or Philosopher. His chief aim is life is to order and to systematize his knowledge”.

Economic

"The economic man is characteristically interested in what is useful. Based originally upon the satisfaction of body needs (Self-preservation), the interest in utilities develops to embrace the practical affairs of the business world, the production, marketing and consumption of goods, the elaboration of credit, and the accumulation of tangible wealth. This type is thoroughly practical and conforms well to the prevailing conception of the average American businessman”.

Aesthetic

"The aesthetic man sees his highest value in form and harmony. Each single experience is judged from the standpoint of grace, symmetry or fitness. He regards life as a manifold of events; each single impression is enjoyed for its own sake. He need not be a creative artist; nor need he be
effete; he is aesthetic if he but finds his chief interest in the artistic episodes of life".

**Social**

"The highest value for this type is love of people, whether of one or many, whether conjugal, filial, friendly, or philanthropic. The social man prizes other persons as ends, and is therefore himself kind, sympathetic and unselfish. He is likely to find the theoretical, economic and aesthetic attitudes cold and inhuman. In contrast to the political type, the social man regards love as itself, the only suitable form of power, or else repudiates the entire conception of power as endangering the integrity of personality. In its purest form the social interest is selfless and tends to approach very closely to the religious attitude".

**Political**

"The political man is interested primarily in power. His activities are not necessarily within the narrow field of politics; but whatever his vocation he betrays himself as a Macht mensch. Leaders in any field generally have a high power
value. Since competition and struggle play a large part in all life, many philosophers have seen power as the most universal and most fundamental motives".

Religious

"The highest value for the religious man may be called unity. He is mystical and seeks to comprehend the cosmos as a whole, to relate himself to its embracing totality. Spranger defines the religious man as one whose mental structure is permanently directed to the creation of the highest and absolutely satisfying value experience".

Commenting on this revised scale Shaffer remarked "In its excellent new revision, the study of values seems destined to several more decades of service as a tool for guidance and research". According to Super and Crites "This test is first of its kind has been most thoroughly studied and is still more widely used". This test has been used in various studies by Bhatnagar (1972), Bowie and Morgan (1962), Das (1973), Dukes (1955), Kaul (1974) Khare (1968).

The final item analysis on the revised edition showed a positive correlation between each item and the
total score for its value at the .01 level of significance.
The mean split half reliability coefficient was .82 as
compared with .70 for the old form, the range being .73
(Theoretical) to .90 (Religious).

Scoring procedure:

The test contains 45 questions divided into two
parts. There are 30 questions in part I and 15 questions
in part II. It employs forced choice items which require
a choice between two or four alternatives falling in
different value categories. In the first part two
alternatives have to be rated either as 3 and 0, or
0 and 3, or 2 and 1, or 1 and 2, according to the
agreement or disagreement with the statement. In part
two the four alternatives are rated in order of personal
preference, giving 4 to the most attractive, 3 to the
second most attractive, 2 to the next one and 1 to least
attractive alternative. The total from each of the page
of the test are transcribed in a required proforma of
six columns. The total of each column after applying
correction figures as given in manual represents final
total on each of six values.
To find out just where a testee stands the scores are classified into high and low scores and outstanding high and low scores.

**High and Low Scores**

A score on one of the values may be considered definitely high or low if it falls outside the following limits. Such scores exceed the range of 50 percent of all scores for that value i.e. 1 probable error. The ranges are

| Theoretical | 34-46 | Social | 35-45 |
| Economic    | 34-46 | Political | 35-45 |
| Aesthetic   | 34-46 | Religious | 33-47 |

**Outstandingly high or low scores:**

A score on one of the values may be considered distinctive if it is higher or lower than the following limits. Such scores fall outside the range of 82% of all scores for that value i.e. exceed 2 probable error.

| Theoretical | 29-51 | Social | 30-50 |
| Economic    | 29-51 | Political | 31-49 |
| Aesthetic   | 27-53 | Religious | 25-55 |
The study of values test - affords a method scaling the relative predominance of the theoretical, economic, aesthetic, social, political and religious values in personality. The results indicate that Spranger is on the whole justified in regarding these values as constituting generalised motives in men and that the test succeeds in determining with some precision the prominence of each value in any single individual.

Procedure:

It needs mention that the investigator in the proposed research design assumed that subjects who, score high and low on Lidhoos Delinquency proneness scale as well as Maudelay personality Inventory will be considered for intensive study in relation to student activism. This assumption is based on the preliminary analysis of twenty established student activists and twenty established non-activists. To certify the above postulates the reports from the university administration, Proctor and Dean Student's Welfare Offices were screened and it was confirmed that the preliminary selection of twenty activists and twenty non-activists was based on the persistent continuance record of the activists and
non-activist group. Further when these two extreme groups were treated to LD proneness scale and MPI, it was very glaringly established that activists had a high/high score on LD proneness scale and MPI as compared to low/low score of non-activists. The high and low scores of these twenty activists and twenty non-activists were further established with the help of parent comment check list (comprehensive information schedule) developed by the investigator for the purpose of the proposed investigation. Accordingly these two tests were considered as to form the logical basis as criterion variables to be considered in the proposed research.

Selection of Sampling:

After a thorough screening of twenty activist and twenty non-activist students on the basis of test scores on LD proneness scale, MPI and parent comment check list (comprehensive information schedule), it was established that LD proneness scale and MPI will serve as the criterion variables for the total sample to be included in the proposed research. Accordingly a randomly selected sample of 500 post-graduate students was taken up from the various faculties and post-graduate departments of Kashmir University. For the selection of the sample normal random procedure
was adopted and subjects were selected on the basis of
roll numbers, which were shuffled from the cards carrying
the numbers. The age range of the subjects was between 22
to 25 years. As for the delimitation of the study female
subjects were not included in the proposed research.
Similarly research scholars whose age range was 25 years
above also were not included in the sample. It needs
mention that the sample of 500 students was drawn out of
a total population of 1,500 students on the campus.

Administration of the Tests:

First phase: Having established the two tests as
criterion variables and the other two tests as predictors
the investigator administered Lidhoos Delinquency proneness
scale and Eysenck's Maudslay personality Inventory to
total sample of 500 subjects. These two tests were
administered in different departments and in different
sittings. The instructions given to the subjects were
strictly according to the respective manuals and the
subjects were directed to give their first choice in
relation to the behaviour depicted in a particular statement.
Finally the answer sheets of all the 500 subjects were
scored according to the instructions provided in the
manuals. On the basis of total score on LD proneness scale and MPI only such candidates were considered for final analysis as had achieved high score on LD proneness scale, high score on MPI and low score on LD proneness scale and low score on MPI.

Second Phase: This constellation offered two extreme groups of fifty subjects in each group, who were considered for indepth study with the help of Cattell's 16 PF and Allport, Vernon and Lindzey study of values. The two tests were administered to two extreme groups in the normal test situation based on the instructions given in the respective manuals. In this way the investigator obtained four test scores of the activist group and four test scores of the non-activist group besides the comprehensive family record which was collected with the help of parent comment check list (comprehensive information schedule). It needs mention that Cattell's 16 PF and Allport, Vernon and Lindzey value scale were strictly administered on the basis of instructions provided in the manuals. The total score of each subject in four different areas has been compiled together and is presented in various tabular forms in the following chapter. Wherever necessary the raw scores were converted into standard scores for the final statistical treatment.