CHAPTER - III

METHODOLOGY

The review of literature (presented in the earlier chapter) has shown that in India not much research has been done on the problems of dropout at higher education level. Over the years much has been discussed about wastage and stagnation at higher education level. Yet, no comprehensive study has been undertaken to investigate the root causes of the problem. The main objective of the present study is to ascertain various factors associated with the dropouts at higher education level, and to find out if any typical personal and social variables are associated with the dropout phenomenon.

The specific objectives of the study are presented below:-

1. To ascertain the percentage of probable dropouts to the initial enrolment in a college.

2. To determine the real dropouts, after excluding migration, transfer to other courses, and others who even after leaving the colleges completed the graduation elsewhere.

3. To ascertain the correlates of dropouts in the field of higher education.
4. To ascertain the causative factors of students dropping out of the courses concerned.

5. To ascertain if dropouts and non dropouts differ in terms of some of the socio-demographic and personality variables.

6. To ascertain if dropouts and non dropouts differ in their attitude towards higher education, achievement motivation, adjustment areas and future plans.

In order to achieve the above mentioned objectives, the methodology adopted has been enumerated in detail. The contents of this chapter have been presented in the following order: hypotheses and their rationale, followed by research design, selection of subject, selection of tools for obtaining the information and statistical techniques used.

**HYPOTHESES AND THEIR RATIONALE** :-

Following hypotheses based on certain assumptions were formulated to study the above mentioned objectives:-
Hypothesis - 1

"THERE WILL BE DROPOUTS IN THE GRADUATION LEVEL OF HIGHER EDUCATION AND THIS WILL VARY FROM COLLEGE TO COLLEGE".

Rationale:

The problem of wastage in education has very often caught the attention of educational researchers, planners and administrators. Apart from observation that there is wastage, it has also been associated to a very high rate of dropout. Sagolsem (1977) in his research demonstrated that more or less half the students who enroll leave their studies prematurely. Rawat (1970) observed that in higher education, out of every 100 students who enter the first year class in a degree course only 41 reach and pass out. A similar rate of dropouts have been reported by others also. Montgomery (1964), Summerskill (1962), and Staudt (1965) had also reported that only half the students who entered the college pursued their course of study until graduation. The Robbins Committee (1961-63) in their report had compared the dropout rates of U.K. with those of USA and Australia and showed that in the United States as compared to the U.K. 40 to 50% of students
who enrolled for degree courses in the 1950s left without obtaining a degree, while a further 10 percent took longer than the required time. Thus dropouts at higher education level appeared equally high both in the developed and the developing countries. Based on the above rationale one may hypothesize that there will be dropouts at the graduation level and this will vary from college to college.

Hypothesis - 2

"WITHIN THIS VARIATION, DROPOUT WILL BE A FUNCTION OF A NUMBER OF CAUSATIVE FACTORS".

Rationale:

Every phenomenon that occurs has an underlying cause. Similarly the dropout phenomenon has certain causes. However, the studies on dropouts have shown that family background (Swart - 1976; Jackson, 1978), first generation learners (Mehta, 1983), irrelevance of education and (Bean, 1979), poverty (Astin, 1964) are some of the causative factors leading to dropouts at school level. Thus, it is not just a single but at times more than one factors appears to have contributed to the dropout phenomenon. It appears
that not one but at times many factors contribute to the dropout phenomenon at school level. Thus at the college level too, one may expect not one but a combination of factors to contribute to the dropout phenomenon. Hence it can be hypothesized that dropout will be a function of certain causative factors.

Hypothesis - 3

"THE CAUSATIVE FACTORS LEADING TO DROPOUTS WILL VARY IN TERMS OF THE TYPE OF (RURAL/URBAN) COLLEGE IN WHICH A STUDENT GETS ADMISSION".

Rationale:

This hypothesis is based on the assumption that the type of college, rural/urban based, plays an important role in every aspect of a student's life. Though the studies conducted in this field so far have not taken this factor into consideration, yet for the present study this factor has been taken to see the effect of the type of college on a student dropping out of the course.
Hypothesis - 4

"DROP OUT FROM COURSES IN HIGHER EDUCATION MAY BE THE EFFECT OF A COMBINATION OF A GROUP OF FACTORS RATHER THAN OF ANY SINGLE FACTOR".

Rationale:

During the 1960's educationists expressed concern over the dropouts from higher education and made efforts to study the phenomenon. They tried to single out the fundamental causes. Although scholars tried to study the phenomenon from different angles and tried to pin point various reasons, they could not succeed in deducing the variables which contributed most to the dropout phenomenon. For instance, McCam (1985) found that personal competency and social support were not significant predictor forpersisters while others such as, Jackson (1978), Astin (1964), Kamat and Deshmukh (1963), and Miller (1970) found it to be highly significant for the prediction of persisters and non persister. However, most of the researchers had investigated more than one variable contributing to the problem. Thus, it can be hypothesized that the dropping out of the courses will be a combination of a group of factors rather than a single factor.
"THE CAUSATIVE FACTORS RELATED TO DROPOUTS WILL VARY IN TERMS OF SEX FACTOR".

Rationale:

Sex factor has always been one of the major determinants of one's behavior. In many studies relating to education and related fields, researchers rate performance as a function of sex factor. For instance Mishra (1968) found that the attitude of boys towards mathematics was more favourable than that of girls. Grewal (1971) and Marcia (1980) found the difference in the preference of vocations between boys and girls. Pathak in 1970 and again in 1972 found that the differences between boys and girls were significant on health, social and adjustment areas. Kohli (1972) found no significant sex difference in his study on learning. Mattoo (1972) concluded that the two sexes did not differ from one another in areas of adjustment, except in the sphere of emotional adjustment.

Thus keeping the view that sex may be one of the major factors, it was decided to study its effect on the various causative factors relating to dropouts.
Hypothesis - 6

"THERE WILL BE A DIFFERENCE BETWEEN THE DROPOUTS AND NON DROPOUTS IN REGARD TO THE AGE FACTOR. TO BE MORE SPECIFIC THE NON DROPOUTS WILL BE SIGNIFICANTLY YOUNGER IN AGE THAN DROPOUTS".

Rationale :

Dropouts may also be influenced by the age factor. Generally, the ultimate goal for any person is to get a job, settle down to establish one's own family etc. Education is considered a facilitator to obtain a better renumerative and satisfying job. If for some reason, a person had started studying late in his life or had failed in some classes at school level etc; he will be relatively more aged than other students taking admission to an undergraduate class in a college. For such a person getting a job rather than completing the course would be more important and thus one may expect an older person to leave the course midway as compared to the younger age persons. For instance, Sanders (1963), Philip (1955), Fleming (1959) and Schonell (1962) observed that younger candidates tended to obtain better degree results. Thus it can be hypothesised that the dropout may be a function of age factor.
Hypothesis - 7

"THERE WILL BE A DIFFERENCE IN THE MARITAL STATUS OF DROP OUTS AND NON DROP OUTS. TO BE MORE SPECIFIC, THERE WILL BE SIGNIFICANTLY MORE MARRIED PERSONS AMONGST THE DROP OUTS THAN NON DROP OUTS".

Rationale:
The marital status of a student is a factor which has not caught the attention of many researchers in this field and so has not been extensively studied earlier. The few who have dealt with this factor for example, are Kamat and Deshmukh (1963), and Harris (1972). The present study has chosen marital status as one of the important factors as affecting dropouts. It is based on the general observation that mostly female students dropout at various levels of study if they get married, and to a certain extent male students are also affected by marriage, because after marriage they prefer to opt for any job available instead of continuing in higher education. Thus it was thought that the marital status of a student may be one of the factors for dropping out from the college course.
Hypothesis - 8

"THERE WILL BE A DIFFERENCE BETWEEN DROPOUTS AND NON DROPOUTS IN REGARD TO THE TYPE OF FAMILY TO WHICH THEY BELONG".

Rationale:

Family has always been one of the most important factors in an individual's life. Over the years the joint family system gave way to nuclear families bringing in its wake many types of problems, particularly in cities where both parents go to work leaving the child to fend for himself. This is a contrast to the joint families where the child was looked after by one or other family member. In nuclear families an individual has to put in a lot of efforts to keep up the parental expectations, whereas in joint families this may not necessarily be the case. Furthermore studies by Astin (1964), Bayer (1968), Jackson (1978), and Nayal (1986) have all shown that dropout students at college level belong to larger families as compared to those who completed their education. Since joint families have larger number of members as compared to the nuclear families, it was thought worthwhile to ascertain if dropouts are more from
the joint than from nuclear families, hence this hypothesis was formulated.

**Hypothesis - 9**

"THERE WILL BE A DIFFERENCE BETWEEN DROPOUTS AND NON DROPOUTS WITH REGARD TO THE PARENT'S (a) LEVEL OF INCOME (b) OCCUPATION AND (c) EDUCATION".

**Rationale:**

The education of a child is generally decided by the parents. Many students go in for higher education to improve their employment prospects. Parents have a say in the matter of choice of course to be taken at college level, subject to be studied, college to join etc. Father's income and occupation need to be considered as these have definite influence on parents preferences. Studies conducted on dropouts at school level (James 1980, Sharma 1976, and Kumar 1980) show that parents with low level of income contributes as the main reason for a pupil to dropout of the school. In studies conducted on college students, parent's level of income and occupation have figured as important variables. Shitra (1970), and Karandikar (1975) concluded that the women students going in for the higher education were mostly from upper
income group. Astin (1964), Bayer (1968), Swart (1976) and Nayal (1986) pointed out that higher majority of dropouts belonged to relatively lower socio-economic background.

In a totally different context, parent's income and occupation were observed to cause anxiety and adjustment problems for the students. For instance, Sharma (1971) studied that the students whose parents were holding occupations of high prestige had low anxiety. Sagar (1971) concluded that students whose father had high prestigious occupation were better adjusted. Reddy (1970) observed that students whose fathers were engaged in manual work or had a blue collar job were less adjusted than the students whose parents were in good business or higher profession.

Thus, it is seen that socio-economic background of a student appears to play a major role in pursuing higher education. Hence the above hypothesis was formulated.
Hypothesis - 10

"THERE WILL BE A DIFFERENCE BETWEEN THE DROPOUTS AND NON DROPOUTS IN TERMS OF THEIR PREVIOUS EDUCATIONAL RECORDS".

Rationale:

A student's educational performance, somehow, determines his future education. This has also been studied by many scholars. According to Astin (1964), and Blanchfield (1971) the rank of a student in his high school leaving examination has an important influence on a student dropping out of the college. Very few studies, relating the performance of high school students level and dropouts at college level have been reported, (Bayer (1968) and Swart (1976)). Hence an attempt has been made to ascertain if the dropout: phenomenon is in any way related to the performance of students in their high school leaving examination.

Hypothesis - 11

"THE DROPOUT MAY BE A FUNCTION OF THE TYPE OF SCHOOL IN WHICH THE STUDENT HAD STUDIED".

Rationale:

As is well known, there appears to be relatively less uniformity in schools, in terms of method of
teaching, teacher's effectiveness, organisational climate in schools etc.; seem to significantly influence a student's performance. Type of schools and its differential effect on performance had been studied in India by Veeraraghavan (1984), Sen Gupta (1984) etc. These studies have categorically shown that the type of school in which a person studies affects his academic performance as well as vocational plans etc.

Thus, one may hypothesize that the type of school from which a student had passed out may have influenced his dropping out of the college. Hence it was thought worthwhile to investigate the type of schooling they have attended before going to college.

Hypothesis - 12

"THERE WILL BE A DIFFERENCE BETWEEN THE DROPOUTS AND NON DROPOUTS IN THEIR ATTITUDE TOWARDS HIGHER EDUCATION".

Rationale:

Attitude, which is predisposition to act, is an important factor in motivating a person to act for or against some person, object or anything. It has been demonstrated by many e.g. Edward (1972), Wikey (1970), Watson (1953), Fennoman (1974), and Webb (1972)
that a positive and favourable attitude towards education would lead to higher performance in the concerned field. Baureti (1972) found a very high degree of correlation between attitude and academic achievement. Similarly, Venkataraman (1975) found that since there is a negative attitude towards girl's education it is one of the reasons for girls to dropout off the college. However, these studies have not related attitude of students towards higher education and their dropping out of the college. Hence, it was thought worthwhile to study the attitude of student's towards higher education and then relate the same to the dropout phenomenon and hence this present hypothesis was formulated.

**Hypothesis - 13**

"THERE WILL BE A DIFFERENCE BETWEEN THE DROPOUTS AND NON DROPOUTS WITH REGARD TO THEIR LEVEL OF ACHIEVEMENT MOTIVATION".

**Rationale:**

Achievement motivation has been recognised as one of the predictor of success or failure. It has been observed that higher the achievement motivation, better the performance, and lower the achievement motivation poorer the performance. In certain
studies on the academic achievement of college students, Rao (1964 b, 1967 a, 1978 b), Mehta (1968) and Sharma (1964), observed that achievement motivation was related positively and significantly to academic achievement. Similarly, in certain other studies (Phutela 1976 and Moos 1976) students qualities such as the level of aspiration and achievement motivation were found to be important for their academic success.

Thus, it was conjectured that dropouts and non dropouts will vary in their achievement motivation and thus the above hypothesis was formulated.

Hypothesis - 14

"THERE WILL BE A DIFFERENCE BETWEEN THE DROPOUTS AND NON DROP OUTS WITH REGARD TO THEIR ADJUSTMENT IN THE AREA OF (a) HOME, (b) HEALTH, (c) SOCIAL, (d) EMOTIONAL, AND (e) EDUCATIONAL ASPECTS".

Rationale:

Personality as defined by Psychologists, is a dynamic totality of an individual which is continuously changing due to interaction with the environment. It is inferred from the conduct, behavioral activities and movements and every thing else concerning the individual. It is the individuals way of responding
to the environments, the way in which an individual adjusts with the external environment indicates his personality. Studies by Maxwell (1960), Grace (1957), Edelbrock (1975), and Shah (1982) found that dropout can be predicted by personality tests. One may thus expect that a well adjusted personality will also be adjusted with home, health, social, emotional and educational areas which are all part of the environment. If an individual is well adjusted to his environment for instance, to a college in which he seeks admission, then one may expect that he would continue with his course till the end. On the other hand a less adjusted person may not be able to continue with the course and thus dropout of the same.

Thus, one may expect a difference between dropouts and non dropouts in the adjustment of five areas mentioned above. Hence the above hypothesis was formulated.

Hypothesis 15

"THERE WILL BE A DIFFERENCE IN THE FUTURE PLANS OF DROPOUTS AND NON DROPOUTS".

Rationale:

In many studies related with the problems of college students it was found that a student's future plan
about his career affects his academic performance and success. As studied by Astin and Panos (1969) a student's future plan about his career at the time of admission was the best indicator of his academic performance. Gaur (1973) found a significant difference in the level of occupational aspiration of the students coming from the different strata of society. Sawhney (1975), Mathews (1970) found that a student's choice of study course is compatible with his vocational choice. Thus, if the course taken by a student is able to give the feeling to him that his future career is ensured by the course concerned, then one may expect that he will not dropout of the course, to move one step away from this argument, one may state that those students who have clear cut future plans will not so easily dropout of the course which they have joined as compared to the dropouts. Perhaps those who dropout, take up the course without any typical future plans as the non dropouts. The present study would like to ascertain if the above is true and this hypothesis was laid down.
OPERATIONAL DEFINITIONS :-

DROPOUT:

This is the term which is most widely and variably used in the educational field. Different scholars have used it in different ways; for example a student who leaves the school or college and joins and completes the course from somewhere else will be considered a dropout by some people while others may not consider him as a dropout. In most of the literature available on the dropout study; merely leaving the course midway by a student has been taken as dropping out of the institution, without considering his/her further involvement in the studies. From the researchers' view point this is not an appropriate definition of dropout. It has been observed that often a student who leaves the college or course midway due to so many reasons, does not necessarily leave the course incomplete entirely, but joins some other institution, course or college, or diploma and thus pursue his studies. In some cases after a break of a year they continued the studies and completed the course. Thus, the question arises as to 'who are the real dropouts?' To answer this question one has to consider the exact definition of dropouts. According to International Dictionary of Education, U.S.A. (1977) dropout is a person who leaves school/college before
completing his/her graduation. And the Concise Dictionary of Education, U.S.A. (1982) defines dropouts as follows, "A student who leaves the formal education system before completing the studies required of him for a high school diploma or a college degree thereby forfeiting graduation".

In both the above definitions, though leaving the institutions has been emphasized, leaving the course incomplete has been given relatively greater importance. In fact in the second definition, the word - 'education system' has been used instead of school or college. One may therefore infer dropout who not only leaves the school or college but the education system itself. Thus a dropout can be defined as one who not only leaves one institution midway, but also does not complete the course anywhere else. In this study the dropout has been defined in this sense. So, to consider a student as a dropout it is necessary to investigate his later academic engagements after leaving the college. Dropouts are not the same as attrition and need to be differentiated from the same.

**ATTRITION:**

The student who seeks admission into a college but does not persist in completing the course, but joins some other institution could be considered as attrition to the first college.
WASTAGE AND STAGNATION:

Due to failure and repetition of a class/course, some students take longer duration to complete the course to which they initially took admission. Such cases can be considered as wastage and stagnation.

NON DROP OUT:

This term refers to those students who completed their graduation course within the scheduled time without changing the course or college.

GRADUATE:

A person who receives a graduation degree from the institution where he took admission in the beginning, or from any other institutions, within the period prescribed for that or after wasting some time, as a regular candidate or as an external candidate or receives the degree by correspondence.

TYPE OF FAMILY:

In this study two types of family system have been considered; (a) Joint family , (b) Nuclear family.

Nuclear family refers to those families where parents and their children alone live. The joint refer to the families who do not fall in the above category.
TYPE OF SCHOOL:

Since in India there exist a variety of schooling system, these have been divided on the basis of the Delhi Administration classification as follows -

1) **Public school**: A school which is a member of the Indian Public School Conference (IPSC) and thereby meets all the statutory requirements of this body. These requirements relate to the academic freedom of the headmaster, conditions of service of the staff, facilities for games and extra curricular activities and residential accommodation for a certain proportion of the student body (De Souza 1974).

2) **Private school**: It refers to a school run by a private education trust, unaided by the state government. The students in these schools score high in both the academics and in extra curricular activities, and the physical and material facilities provided were extensive. The children by and large belonged to the middle, upper-middle and high income groups.

3) **Central schools**: These are the schools run by the central government and governed by the central school organisation. Central schools all over the country follow a uniform syllabus and prepare their students for
the C.B.S.E. examinations. The facilities extended to the students are adequate and these schools are largely patronised by the middle class, government officers etc.

4) **Government schools**: are the schools run by the state government. In Delhi the NDMC and the DMC are responsible for the provision of primary schools, and Delhi Administration for the middle and secondary schools. These schools are present in almost all the residential colonies of the city. They however, cater to the lower middle class and lower class children.

**HIGHER EDUCATION**:

Higher education includes all education above the level of the secondary schools such as colleges, universities, graduate schools, technical institutes etc. Thus the graduation level comes under higher education. In this study the word 'Higher Education' refers only to the graduation level and not the above levels.

**ATTITUDE**:

An attitude may be defined as a learned and more or less generalised and effective tendency or pre-disposition to respond in a rather persistent and characteristic manner,
usually positive or negative or indifference in reference to some situation, idea, value, object or person or a group of persons. In the present study, attitude refers to the score obtained by an individual on the scale administered to him/her and specially devised for this purpose.

**ACHIEVEMENT MOTIVATION:**

Achievement motivation refers to states within a person that drive a behavior toward achieving a set goal. It has three aspects -

a) a driving state within the organism,

b) the behavior aroused and directed by this state and

c) the goal towards which their behavior is directed.

In other words it can be said that achievement can be a result of the strength of the motivation. Achievement motivation has been studied by a large number of scholars. In the present study, achievement motivation was derived by the scores obtained by a student on Achievement Motivation Scale (Hafeez & Shantamani 1968) administered to him/her by the researcher.
PERSONALITY ADJUSTMENT:

This refers to the scores obtained on the Adjustment Inventory (Sinha & Singh 1971) by the students in five areas, viz., home, health, social, emotional and educational areas.

DETERMINING THE DROPOUTS:

Since the colleges concerned do not keep a record of dropouts, but merely indicate how many were admitted and how many took the final examination at the end of the third year, it is not possible to determine the exact number of dropouts from the records. Further, to consider the difference in numbers between those who took admission initially and the number who appeared for the final examination would give an erroneous picture of dropouts as there would be many who would have left the college to join other college or to take another course or may have migrated to another city to study.

In order to arrive at the number of real dropouts in each college, the following steps were taken:

Step - 1

The total number of students enrolled in the courses offered by the particular college at the graduation level, were noted down.
Step - 2

The total number of students from the enrolled group who appeared in the final year examination were taken down.

Step - 3

The difference between the number of students appearing in the final year examination and the number of students enrolled at the time of admission were calculated to get the number of students who had withdrawn from their stipulated course for which they had taken admission initially.

Step - 4

This number of students would be the probable dropouts who then be scrutinized to ascertain the -

i) number of students who had withdrawn their names from the rolls.

ii) number of students migrated to other college or courses.

iii) number of students transferred to another city or country.
Step - 5

From the number of probable dropouts, the above three categories of students were subtracted. To these students letters were sent and personal interviews were conducted to ascertain how many of these were dropouts who took admission but did not pursue higher education at all. These were the real dropouts for the purpose of this study.

RESEARCH DESIGN

(1) To test hypothesis no. 1, 2, and 3 the real dropouts (calculated in terms of the above 5 steps) were considered proportionately in terms of the number of students who took admission initially to all the colleges taken up for the present study and the differences in dropouts were compared across the colleges.

(2) For testing hypothesis no. 4, a correlation matrix and regression analysis were used to determine the various factors which contribute to the dropout phenomenon.

(3) For testing hypotheses 5 to 15 a matched group of non dropouts from the same colleges were taken with the same number of students (N = 115) and comparison between the dropouts and non dropouts were made with the help of
Mean, Standard deviation, t-test and chi-square test wherever applicable.

**SAMPLING:**

i) **Setting**: The setting for this study was Delhi University divided into four zones, viz., East, West, South and North.

ii) **Colleges**: From each zone, the number of colleges affiliated to the Delhi University were listed, and attempt was made to study all the colleges of each zone.

iii) **Students**: From each of these colleges enrolment register of the year 1982-83 were taken up to see the total number of candidates enrolled for the academic years 1982 to 1985, in all the courses offered by the college at graduation level. In order to arrive at a representative sample of the students population of Delhi University, the following procedures were adopted –

a) all the constituent colleges of Delhi University were divided into 5 categories on the basis of
the nature of the course content, which is as follows:

Total constituent colleges (64)

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical (8)</td>
<td>Professional (7)</td>
<td>Engineering (2)</td>
<td>Evening (10)</td>
<td>Central (37)</td>
</tr>
</tbody>
</table>

Source: University Hand Book, 1982-83.

b) The colleges under the categories A, B & C, that is, the Medical, Professional and Engineering colleges were not taken into consideration, because studies conducted earlier, and the general observation have clearly indicated that wastage at this level of education was negligible. Hence, it was decided to study only those colleges where dropouts were present.

c) The college under the category D or the evening colleges were also not taken, because these are not the colleges which provide full-fledged courses. Moreover, the students in these colleges normally do not belong to 'student' category because they are already engaged in some occupation. In other words these are the students who are known to have no time for attending colleges regularly in the
morning times and thus had joined evening courses. Thus these were eliminated from the sample.

d) Thus the colleges under the category E which offered general courses and provide Arts, Science and Commerce courses to the students were the area of study, and from which the samples were drawn for this research.

The present study thus took up all the 37 colleges for the purpose. An attempt was made to get the required data from all these colleges. Despite personal call and letters and reminders only 20 colleges out of 37 could provide the necessary information as given below:

1. Enrolment figures at the time of admission to B.A., B.Sc. & B.Com. courses.

2. The number of students withdrawing their names after getting admitted.

3. The number of students from the enrolled, who failed in the 1st and 2nd year.

4. The number of students who appeared in the final year examination.

5. The number of students who took migration/transfer to other colleges.
6. The number of students whose names appeared at the time of enrolment but missing in the later period and for whom the college also has no record. (The proforma used for this purpose is given in the appendix).

**DROP OUT FIGURE:**

All those students who took admission in the 20 colleges in 1982-83 but did not appear in the final year examinations in 1985, and for whom college also did not have any information, were all taken as dropout in the initial stage. Their names and addresses were all taken down.

**NON DROPOUT OR GRADUATES:**

A sample of 115 students who completed their graduation were taken as non dropouts for the purpose of control group. The sample was drawn from the students who enrolled in 1982-83 and completed graduation in 1985. This sample was taken at random from all the 20 colleges matched for the college, stream of course, age and sex factors.

**TOOLS FOR DATA COLLECTION:**

As mentioned in the previous section, two proforma were used, one for collecting information on the number of
enrolment in each college, number of withdrawals etc. and number of dropouts, and the other for collecting information on the dropouts to know their whereabouts. Both of these are reproduced in appendix I & II respectively.

2. After arriving at the actual dropouts, another equal number of non dropouts were selected, as mentioned earlier, and these two groups were compared for personality adjustment, attitude towards higher education, achievement motivation and socio-demographic profile. The details regarding the instruments used are given below:

i. The sentence completion test for achievement motivation.

ii. The personality adjustment inventory for college students.

iii. The socio-demographic factors instrument.

iv. An open questionnaire to ascertain the reasons for dropping out.

v. An attitude measurement scale, devised specially for the purpose of this research.

1. THE SENTENCE COMPLETION TEST FOR ACHIEVEMENT MOTIVATION:

AUTHORS: V.S. Shantamani and A. Hafeez.

TIME REQUIRED: No time limit. Usually it needs 20 minutes to complete the test items.
MAIN FEATURES: There are 50 sentences, each of which has three alteration, A, B, C, and the subject has to indicate the alternative he generally prefers. (See in appendix).

LEVELS: The adult men.

SCORING: By totaling the number of achievement related items that have been in the keyed direction. Each tried has one achievement related item.

RELIABILITY: Split half reliability of the test was found to be 0.77.

VALIDITY: Coefficient of concurrent validity was found to be 0.88.

NORMS: Percentile norms for this test (SCT) based on the scores of 150 engineering graduates and 233 engineering diploma holders are available.

2. ADJUSTMENT INVENTORY FOR COLLEGE STUDENTS


TIME REQUIRED: There is no time limit. Ordinarily an individual takes 18 minutes in completing the test.
MAIN FEATURES: The inventory is in English as well as in Hindi. It has 102 items (Home 16, Health 15, Social 19, Emotional 31 and Educational 21).

LEVELS: All college students.

RELIABILITY: Split half reliability of the test was found to be, 94 for total score and for Home 87, Health 83, Social 96, Emotional 95 and Educational 97.

VALIDITY: The co-efficient of each item by biserial correlation method was obtained 58, students were asked to tick each item either 'yes' or 'no' whichever may be true in their case.

SCORING: Transparent scoring key was available for each areas and the responses tick marked were considered and each was assigned a weightage of one (1) score.

After assigning one score to each ticked item the classification of the adjustment was done as follow:
CLASSIFICATION OF ADJUSTMENT IN TERMS OF TOTAL SCORE

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
<th>Range of score</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Excellent</td>
<td>12 &amp; below</td>
<td>12 &amp; below</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>Good</td>
<td>13 - 28</td>
<td>13 - 27</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>Average</td>
<td>29 - 45</td>
<td>28 - 42</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>Unsatisfactory</td>
<td>46 - 61</td>
<td>43 - 57</td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>Very Unsatisfactory</td>
<td>62 &amp; above</td>
<td>58 &amp; above</td>
<td></td>
</tr>
</tbody>
</table>

On the basis of range of score given in the table above, the personality adjustment of the subjects was assessed.

A further classification of the adjustment was done in terms of the areas of adjustment. For different area of adjustment the score was done, as follows:

SCORING FOR THE HOME ADJUSTMENT

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
<th>Range of score</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Excellent</td>
<td>0 - 1</td>
<td>0 - 1</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>Good</td>
<td>2 - 3</td>
<td>2 - 3</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>Average</td>
<td>4 - 7</td>
<td>4 - 5</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>Unsatisfactory</td>
<td>8 - 9</td>
<td>6 - 8</td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>Very Unsatisfactory</td>
<td>10 &amp; above</td>
<td>9 &amp; above</td>
<td></td>
</tr>
</tbody>
</table>
**SCORING FOR HEALTH ADJUSTMENT**

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
<th>Range of score</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>A</td>
<td>Excellent</td>
<td>0 - 1</td>
<td>Zero</td>
</tr>
<tr>
<td>B</td>
<td>Good</td>
<td>2 - 3</td>
<td>1 - 2</td>
</tr>
<tr>
<td>C</td>
<td>Average</td>
<td>4 - 5</td>
<td>3 - 6</td>
</tr>
<tr>
<td>D</td>
<td>Unsatisfactory</td>
<td>6 - 8</td>
<td>7 - 9</td>
</tr>
<tr>
<td>E</td>
<td>Very Unsatisfactory</td>
<td>9 &amp; above</td>
<td>10 &amp; above</td>
</tr>
</tbody>
</table>

**SCORING FOR SOCIAL ADJUSTMENT**

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
<th>Range of score</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>A</td>
<td>Excellent</td>
<td>0 - 2</td>
<td>0 - 3</td>
</tr>
<tr>
<td>B</td>
<td>Good</td>
<td>3 - 6</td>
<td>4 - 6</td>
</tr>
<tr>
<td>C</td>
<td>Average</td>
<td>7 - 9</td>
<td>7 - 9</td>
</tr>
<tr>
<td>D</td>
<td>Unsatisfactory</td>
<td>10 - 12</td>
<td>10 - 12</td>
</tr>
<tr>
<td>E</td>
<td>Very Unsatisfactory</td>
<td>13 &amp; above</td>
<td>13 &amp; above</td>
</tr>
</tbody>
</table>
**SCORING FOR THE EMOTIONAL ADJUSTMENT**

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
<th>Range of score</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Male</td>
</tr>
<tr>
<td>A</td>
<td>Excellent</td>
<td>0 - 1</td>
</tr>
<tr>
<td>B</td>
<td>Good</td>
<td>2 - 7</td>
</tr>
<tr>
<td>C</td>
<td>Average</td>
<td>8 - 15</td>
</tr>
<tr>
<td>D</td>
<td>Unsatisfactory</td>
<td>16 - 21</td>
</tr>
<tr>
<td>E</td>
<td>Very Unsatisfactory</td>
<td>22 &amp; above</td>
</tr>
</tbody>
</table>

**SCORING FOR THE EDUCATIONAL ADJUSTMENT**

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
<th>Range of score</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Male</td>
</tr>
<tr>
<td>A</td>
<td>Excellent</td>
<td>0 - 1</td>
</tr>
<tr>
<td>B</td>
<td>Good</td>
<td>2 - 4</td>
</tr>
<tr>
<td>C</td>
<td>Average</td>
<td>5 - 9</td>
</tr>
<tr>
<td>D</td>
<td>Unsatisfactory</td>
<td>10 - 14</td>
</tr>
<tr>
<td>E</td>
<td>Very Unsatisfactory</td>
<td>15 &amp; above</td>
</tr>
</tbody>
</table>
3. **SOCIODEMOGRAPHIC BACKGROUND INSTRUMENT**

In order to study and assess the socio-demographic factors of the students, an instrument was devised, which covered all the factors, which were considered relevant. These were:

1. Age and sex
2. Marital status
3. Type of family
4. Family's income
5. Father's occupation
6. Educational level of parents
7. Type of school attended
8. Marks & percentage at 12th level.

4. **QUESTIONNAIRE FOR ASSESSING CAUSATIVE FACTORS LEADING TO DROPOUTS**:

An open ended questionnaire was prepared to determine the various aspects which may have contributed to students' dropping out of the course to which they had initially taken admission. This questionnaire covered following areas:

1. Reasons for students' dropping out of the course.
2. the future plans of students.
3. linking of education with employment.
4. the examination system and the students' view
point on examination reform, etc. (Detailed
questionnaire is appended in appendix).

5. ATTITUDE MEASUREMENT SCALE:

AUTHORS: Y. Malik and V. Veeraraghavan.

TIME REQUIRED: There is no time limit. Usually it
takes 5 to 10 minutes to complete the items.

MAIN FEATURES: The test is in English. It has 33
items (11 favourable, 11 unfavourable and 11 neutral)
indicating attitudes of varying degree.

LEVELS: All college students both men and women
having knowledge of English.

RELIABILITY: Split half reliability was found to
be 0.89.

CONSTRUCTION OF THE ATTITUDE MEASUREMENT SCALE:

The construction of attitude measurement scale by
the researcher has been presented in the following section:

An attitude measurement scale was developed by the
researcher based on the Thurstone Chave method of attitude
scale construction. In this effort the procedure adopted
was as follows -
STEP - 1: A large number of statements relating to higher education were written. 50 favourable statements, 50 unfavourable statements and 50 neutral statements were written. Thus, a total of 150 statements showing attitudes towards higher education were pooled.

STEP - 2: All these statements were pooled together in a random manner.

STEP - 3: One hundred (100) judges were selected of which 10 each were Academicians, Lawyers, Administrators, Engineers, Psychologists, Doctors, Educationists and Policy makers, Social Workers, 5 were officers working in banks and another five were people from various walks of life.

STEP - 4: The 150 statements earlier mentioned were given to all the 100 judges with the following instructions -

"An attitude measurement scale is being developed to ascertain the attitude of students towards higher education. To develop this scale, 150 statements have been pooled together of which some indicate positive, some negative and some neutral attitude towards higher education. As a judge you are requested to indicate to what extent each one of these statements indicate positive, negative or neutral attitude towards higher education.

Please do not give your own opinion or attitude towards the statements, but merely indicate the degree to which a statement reflects a favourable, unfavourable or neutral attitude towards higher education."
To be more specific, here are 150 statements regarding attitude towards higher education ranging from extremely unfavourable via neutral to extremely favourable. You have to place each one of these statements into the 11-point scale given below.

11-point Scale

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>10</td>
<td>11</td>
</tr>
</tbody>
</table>

1 = Extremely unfavourable

2 = Very unfavourable

3 = Unfavourable

4 = Slightly unfavourable

5 = Neutral inclined to be unfavourable

6 = Neutral

7 = Neutral inclined to be favourable

8 = Slightly favourable

9 = Favourable

10 = Very favourable

11 = Extremely favourable
Now, you have simply to judge each item on the nature and degree of its being favourable, unfavourable or neutral attitude, and to place each statement in the appropriate category on the 11 point scale."

STEP - 5 : The median scale value for each statement on the basis of the scale values assigned to them by the judges was calculated.

After having determined the median scale value for each statement, 33 statements were selected finally. To select these 33 statements following criteria were used -

1. The scale value assigned to a statement should not differ too widely between the judges, for example; one judge placing the item at the one point and another placing the same item at the 11th point.

   and

2. The interval between the chosen items should be such that there should be an equal interval between one item and the other.

Thus 33 finally chosen statements were then pooled together in a random order to produce the final attitude measurement scale.
RELIABILITY: The reliability of the test was determined by split-half method. It was found to be 0.89.

NORMS: Percentile norms based on the 160 postgraduate students and 210 graduates are available.

MAIN FEATURES OF THE SCALE:

The Thurstone method of attitude scale construction is also known as, "The method of equal appearing interval scale", and has been more widely used than any other method of scale construction.

The outstanding feature of this method is the use of judges to determine the point on the attitude continuum. This method is economical and basically a commonsense type of instrument. It permits the construction of fairly reliable and valid scales. The use of judges to estimate the intensity of attitude is rather a strong point of the Thurstone scale. There is an advantage in that, the scale position has a rational meaning that would be difficult to obtain by other methods. The use of judges is particularly helpful in locating the neutral point on the attitude scale. It is because of these estimable advantages that the Thurstone scale method was selected for this study.
LIMITATION OF THE SCALE:

This scale has, however, certain limitations. A potential weakness in this scale is the absence of any direct procedure to determine whether there is only one attitude or more involved in the statements. Although statements with high inter-judge variability are removed from the scale, this is not a precise method for purifying the scale.

PROCEDURE AND ADMINISTRATION:

The entire study was conducted in three phases.

- The first phase was to identify and determine the dropouts in the different colleges.
- The second phase was to contact these dropouts by post to see if they are the real dropouts.
- The third phase was to contact and interview the real dropouts and non-dropouts and filling up the questionnaire designed for the purpose.

Thus in the first phase, the colleges selected for the study were visited personally and admission registers and result registers were scrutinized. Names and addresses of all the 'possible dropouts' were noted down.

In the second phase, each of these noted dropout was sent a reply post card to inquire about the actual reasons
for leaving the course concerned. On receiving the replies the actual dropouts were determined, and the remaining students' responses were analysed for the reasons advanced by them for leaving the colleges.

For the third phase, the genuine dropouts were taken and a door to door contact was made. The questionnaire prepared for the purpose of study was filled by them in the presence of the researcher who also obtained their views informally on certain issues. The parents of the students who were present at the time of the interview, were also asked the questions and the researcher discussed with them, their points of view regarding dropping out of students at college levels.

For comparison purpose, a control group was taken with the same number of regular college goers, who continued on the same course after taking the admission to a course along with the dropouts. These were taken from the 20 different colleges covered in the study. They were also asked to fill the same questionnaire to see the difference between the two.

STATISTICAL ANALYSIS:

The following statistical analysis was used -

1. Inter correlation matrix with product movement coefficient of correlation was worked out.
2. Regression analysis was carried out based on the matrix to ascertain the correlates of dropouts.

3. Mean, standard deviation and t-tests were computed wherever necessary for comparing the dropouts with non dropouts.

4. Where the data were mere descriptive and could not be subjected to parametric tests, the chi-square tests and median tests were used.

The next chapter presents the results obtained on the data analysed with the methodology mentioned in this chapter.