# CHAPTER IV

# METHODOLOGY

The present chapter deals with the nature of the study, objectives and hypotheses, the definition of terms, sample, instrument selection, procedure of data collection and method of analysis of data.

## 4.1.0 NATURE OF THE STUDY

In trying to maximise the pay off from research on educational phenomena, educational researchers have followed methods of inquiry developed in other disciplines. Unfortunately, after more than 80 years of using these borrowed approaches, the pay offs are not very encouraging. On the one hand, educational research has yielded many studies with non-significant differences or with significant differences which favour a given Ho some of the time while contradicting it some other time. On the other hand, there are grand descriptive theories with little or no empirical support, which are also contradictory among themselves.

Van Mondfrans et al (1977) point out another type of methodology that is emerging which may be broadly classified as 'proximal' research. Sutherland (1973) mentions two critical elements which account for a large portion of the final outcome of any research - (1) nature of the phenomenon of interest; (2) suitability of the

instruments of measurement and the methodological strategy implemented by the researcher. Van Mondrans et al (1977) recommends proximal research for education after taking into account these two elements.

**(1) Nature of the Phenomenon :**

One of the chief objectives of traditional research is to 'predict' the phenomenon in question through a knowledge of its properties and the variables that affect it. Implicit within any such endeavour is the assumption that the phenomenon is of a deterministic or probabilistic character (i.e. governed by deterministic laws). Accordingly, a thorough knowledge of the causes will provide the necessary information to predict the behaviour under study, if not totally, then atleast within a probabilistic range of error.

If, however, the phenomenon under observation is stochastic or indeterminate (i.e. only partially, if at all, governed by universal laws) then the researcher cannot successfully predict the behaviour.

A phenomenon that is **inherently** stochastic is one that is not determined, not even in principle, by universally consistent laws but rather by causes that cannot be predicted on a universal basis.

An **effectively** stochastic phenomenon is one which is deterministic in principle but for present purposes must be treated as stochastic due to deficiencies in

(a) observability, (b) measurability or (c) manipulability. If the study falls short in one or more of these areas to a significant degree, the phenomenon may, for practical purposes, be considered to be something less than deterministic.

**(2) Suitability of Methodology :**

The popularly accepted strategies in methodological literature such as experimental, quasi-experimental and correlational designs approach an understanding of universally generalisable laws applicable to contexts that are temporally, spatially and environmentally remote or **distal** to the original context under study.

The new methodology that is emerging, however, does not pretend to such universal application. The chief value of such research lies in the validity of its **temporal** generalisations, whereas environmental generalisation is restricted to contexts identical or **proximal** in character to the context originally studied. These methodologies may be called 'proximal' research or research in search of contextually consistent laws of proximal validity Vs 'distal' research referring to research designated to discover universally consistent laws.

As John Sutherland (1973) points out the inquiry strategy used should be a function of the nature of the phenomenon under observation. Therefore, a phenomenon of stochastic character would best be studied through

proximal research whereas a probabilistic or deterministic phenomenon is best suited to distal research. Inherently stochastic or indeterminate phenomena are restricted to proximal research indefinitely and only limited generalisations can ever be attempted. Effectively stochastic phenomena may gradually become more amenable to distal research. Hopefully, through successful proximal research the door may be opened to eventual distal research, assuming the phenomenon to be, in principle, predictable.

It is felt that educational psychology may yield more efficient results by shifting focus from distal research to proximal research. From a theoretical point of view, a good portion of the subject matter of educational psychology would perhaps be of stochastic or indeterminate in character.

However, the inquiry methods of distal and proximal research are not qualitatively different. They differ primarily with respect to relative emphasis.

The present investigation comes under the category of time specific, proximal research. The aim of the study is to gain in-depth understanding of meaning in life, job stress and burnout in secondary school teachers of Calcutta. Therefore, the investigator did not attempt probability sampling but planned to select a typical sample from a specific context so that a cross section of teachers could provide responses for the required

information and insight. With the same in view non-parametric statistical techniques and case studies have been used to analyse the data.

Burnout is a complex process, arising from individual, organisational and societal factors; it is multifaceted and multidimensional. The available instruments for assessing perceived burnout are self-reporting measures and as such are not free from the inherent weaknesses of such measures. The causes of stress and burnout are varied, complex and interrelated and cannot be determined fully or completely by such instruments.

The limited generalisation that can be made from the study is about other teachers of similar types of schools in Calcutta. A number of such proximal studies undertaken for different groups of teachers may ultimately lead to findings that could be more widely generalised.

The present investigation also comes under the category of survey research, which studies population (or universe) by selecting and studying samples chosen from the population to discover the relative incidence, distribution and interrelations of biographical, sociological and psychological variables. In the words of Kerlinger (1973), 'it focuses on people, vital facts of people and their beliefs, opinions, attitudes, motivations and behaviour'. Biographical and sociological attributes of individuals like sex, age, SES, occupation, race are

related in some manner to psychological variables which include opinions, attitudes and behaviour.

The present study attempts to survey Calcutta teachers by selecting a representative group. It attempts to relate biographical/sociological variables of sex and age to psychological variables of opinions, feelings, perceptions and attitudes of teachers about the meaningfulness of their life and work and the stress and burnout experienced by them in their occupation.

## 4.2.0 OBJECTIVES OF THE STUDY

The present investigation focused on the following objectives :

1. To study if teachers vary in the degree of overall meaning in life and if they show a trend toward low or high meaning.
2. To identify the important sources of meaning in the personal and professional life of teachers and to investigate if teachers vary in the degree of meaning derived from these sources.
3. To find out the relationship, if any, among the different measures of meaning in life.
4. To identify the main sources of stress in teaching and to investigate if teachers vary in the extent of experienced stress.

5. To identify the frequency and intensity of perceived burnout among teachers, and to investigate if teachers vary in the extent of perceived burnout.
6. To find out the relationship, if any, between stress and burnout in teachers.
7. To find out the relationship, if any, between meaning in life and stress in teachers.
8. To find out the relationship, if any, between meaning in life and burnout in teachers.

### 4.3.0 HYPOTHESES

A number of hypotheses, in null form, were formulated to realise the objectives of the study.

### 4.3.1 Objective 1

To study objective 1, the following hypotheses were formulated and tested:

Ho 1 There will be no significant difference in the level of purpose in life of teachers grouped on the basis of sex.

Ho 2 There will be no significant difference in the level of purpose in life of teachers grouped on the basis of age.

### 4.3.2 Objective 2

To study objective 2, the following hypotheses were formulated and tested:

Ho 3 There will be no significant difference in the sources of meaning in life scores of teachers grouped on the basis of sex.

Ho 4 There will be no significant difference in the sources of meaning in life scores of teachers grouped on the basis of age.

Ho 5 There will be no significant difference in the sources of meaning in teaching scores of teachers grouped on the basis of sex.

Ho 6 There will be no significant difference in the sources of meaning in teaching scores of teachers grouped on the basis of age.

### 4.3.3 Objective 3

To study objective 3, the following hypotheses were formulated and tested:

Ho 7 There will be no significant relationship between purpose in life and self-reported meaning in life.

Ho 8 There will be no significant relationship between purpose in life and sources of meaning in life.

Ho 9 There will be no significant relationship between purpose in life and sources of meaning in teaching.

Ho 10 There will be no significant relationship between self-reported meaning in life and sources of meaning in life.

Ho 11 There will be no significant relationship between self-reported meaning in life and sources of meaning in teaching.

Ho 12 There will be no significant relationship between sources of meaning in life and sources of meaning in teaching.

### 4.3.4 Objective 4

To study objective 4, the following hypotheses were formulated and tested:

Ho 13 There will be no significant difference in the stress score of teachers grouped on the basis of sex.

Ho 14 There will be no significant difference in the stress score of teachers grouped on the basis of age.

Ho 15 There will be no significant relationship between scored stress and self-reported stress.

### 4.3.5 Objective 5

To study objective 5, the following hypotheses were formulated and tested:

Ho 16 There will be no significnt difference in the

frequency of emotional exhaustion of teachers grouped on the basis of sex.

Ho 17 There will be no significant difference in the intensity of emotional exhaustion of teachers grouped on the basis of sex.

Ho 18 There will be no significant difference in the frequency of depersonalisation of teachers grouped on the basis of sex.

Ho 19 There will be no significant difference in the intensity of depersonalisation of teachers grouped on the basis of sex.

Ho 20 There will be no significant difference in the frequency of personal accomplishment of teachers grouped on the basis of sex.

Ho 21 There will be no significant difference in the intensity of personal accomplishment of teachers grouped on the basis of sex.

Ho 22 There will be no significant difference in the frequency of emotional exhaustion of teachers grouped on the basis of age.

Ho 23 There will be no significant difference in the intensity of emotional exhaustion of teachers grouped on the basis of age.

Ho 24 There will be no significant difference in the frequency of depersonalisation of teachers grouped on the basis of age.

Ho 25 There will be no significant difference in the intensity of depersonalisation of teachers grouped on the basis of age.

Ho 26 There will be no significant difference in the frequency of personal accomplishment of teachers grouped on the basis of age.

Ho 27 There will be no significant difference in the intensity of personal accomplishment of teachers grouped on the basis of age.

### 4.3.6 Objective 6

To study objective 6, the following hypotheses were formulated and tested:

Ho 28 There will be no significant relationship between scored stress and frequency of emotional exhaustion.

Ho 29 There will be no significant relationship between scored stress and intensity of emotional exhaustion.

Ho 30 There will be no significant relationship between scored stress and frequency of depersonalisation.

Ho 31 There will be no significant relationship between scored stress and intensity of depersonalisation.

Ho 32 There will be no significant relationship between scored stress and frequency of personal accomplishment.

Ho 33 There will be no significant relationship between

scored stress and intensity of personal accomplishment.

Ho 34 There will be no significant relationship between self-reported stress and frequency of emotional exhaustion.

Ho 35 There will be no significant relationship between self-reported stress and intensity of emotional exhaustion.

Ho 36 There will be no significant relationship between self-reported stress and frequency of depersonalisation.

Ho 37 There will be no significant relationship between self-reported stress and intensity of depersonalisation.

Ho 38 There will be no significant relationship between self-reported stress and frequency of personal accomplishment.

Ho 39 There will be no significant relationship between self-reported stress and intensity of personal accomplishment.

**4.3.7 Objective 7**

To study objective 7, the following hypotheses were formulated:

Ho 40 There will be no significant relationship between purpose in life and scored stress.

Ho 41 There will be no significant relationship between purpose in life and self-reported stress.

Ho 42 There will be no significant relationship between self-reported meaning in life and scored stress.

Ho 43 There will be no significant relationship betweeen self-reported meaning in life and self-reported stress.

### 4.3.8 Objective 8

To study objective 8, the following hypotheses were formulated and tested:

Ho 44 There will be no significant relationship between purpose in life and frequency of emotional exhaustion.

Ho 45 There will be no significant relationship between purpose in life and intensity of emotional exhaustion.

Ho 46 There will be no significant relationship between purpose in life and frequency of depersonalisation.

Ho 47 There will be no significant relationship between purpose in life and intensity of depersonalisation.

Ho 48 There will be no significant relationship between purpose in life and frequency of personal accomplishment.

Ho 49 There will be no significant relationship between

purpose in life and intensity of personal accomplishment.

Ho 50 There will be no significant relationship between self-reported meaning in life and frequency of emotional exhaustion.

Ho 51 There will be no significant relationship between self-reported meaning in life and intensity of emotional exhaustion.

Ho 52 There will be no significant relationship between self-reported meaning in life and frequency of depersonalisation.

Ho 53 There will be no significant relationship between self-reported meaning in life and intensity of depersonalisation.

Ho 54 There will be no significant relationship between self-reported meaning in life and frequency of personal accomplishment.

Ho 55 There will be no significant relationship between self-reported meaning in life and intensity of personal accomplishment.

Objectives 1, 2 and 3 are related to meaning in life which was measured by purpose in life, self-reported meaningfulness of life, sources of meaning in life and sources of meaning in teaching.

Objectives 4 and 5 are related to stress and burn-

out, respectively.

Sex and age were selected as the biographical variables most likely to make a difference in the meaning in life, stress and burnout in teachers.

### 4.4.0 DEFINITION OF TERMS

The definitions of the terms in the statement of the problem are given here.

#### 4.4.1 Meaning in Life

Meaning in life has been used in the sense of purpose in life because the individual lives with a purpose and intent and is continually seeking to make his/her existence meaningful. In other words, meaning makes one's life complete and those experiences are meaningful without which, somehow, one's life would be incomplete. Meanings are the significant incentives or concerns with which one is emotionally involved and which one becomes committed to pursue, e.g. personal relationhips, gratifying experiences, important undertakings, missions or goals.

#### 4.4.2 Stress

The term stress has been operationalised as a response of negative affect (e.g., anger, depression, tension, anxiety) resulting from an imbalance or discrepancy between the demands made by certain aspects of the teacher's job and his or her ability to meet or cope with these demands.

### 4.4.3 Burnout

The term burnout has been used to denote a psychological syndrome having three distinct and separate aspects - emotional exhaustion, depersonalisation and lack of personal accomplishment. And burnout is manifested in the frequency and intensity of emotional exhaustion, depersonalisation and lack of personal accomplishment. There is no total burnout score.

### 4.4.4 Secondary Schools

Secondary schools are schools with classes VI to XII. Teachers teaching in the primary sections (classes I to V) were not included in the study.

## 4.5.0 SAMPLE

### 4.5.1 Selection of Schools and Teachers

Sample : 345 teachers (Male 180; Female 165)

The investigator decided against random sampling of schools and teachers for a number of reasons.

In the beginning of this chapter, in Section 4.1.0, it has already been argued that the present study being proximal and time-specific and context-specific in nature, random sampling, i.e. probability sampling, was not called for.

There were also some practial reasons for not attempting to go for random sampling.

The list of recognised High Schools procured from the Education Department of Government of West Bengal mention nearly 500 schools in Calcutta. These do not include schools which are affiliated to the Central Board of Education. These schools are scattered all over one of the biggest metropolitan cities of the world.

The purpose of the present study was to procure detailed and in-depth information from teachers to be followed by selected case studies.

Given the almost impossible public transport system in Calcutta, it would not be physically possible for the investigator to keep on making frequent trips to randomly selected schools spread over the whole city to personally collect the questionnaires from recalcitrant teachers.

The investigator had decided against mailing the questionnaires to teachers of randomly selected schools because of the strong possibility of lack of response from many schools and teachers and also the possibility of getting many incomplete responses which would then no longer make the sampling random. Moreover, it is most likely that the really burned out teachers would be the majority among the ones not bothering to respond and the study would fail in its purpose of locating the extent of burnout in teachers.

Research also shows that teachers perceive events

related to their occupation in similar ways. That is, regardless of sex, age, race, type of school and so on, teachers share common perceptions regarding stress associated with teaching, atleast teachers in the same social milieu (Cichon & Koff, 1978).

Therefore, for the present study, only schools in Central and South Calcutta (the area between S.N. Banerji Road in the North and Jadavpur University in the South) were considered.

The investigator felt that the selection of schools from a limited area would not make any significant difference in the findings. In view of the population mobility in a big city like Calcutta and the heavy demand for seats in schools, teachers and even a large proportion of students of a particular school are not necessarily residents of the neighbourhood. There could perhaps be differences in the attitudes and backgrounds of male and female teachers or of teachers in English medium and Bengali medium schools but not of teachers of schools in North Calcutta or Central Calcutta - geographical location of the school would not be a significant factor. Besides, teachers of the Government schools are transferred from one school to another and selection of one particular school would not make any difference.

The investigator had to make certain changes in the initial list prepared. For instance, initially the

investigator had included all the three Government schools in the specified area - Ballygunj Government School for Boys, Sakhawat Memorial School for Girls and Calcutta Madrasah for Mohammedan Boys. However, the Headmaster of Ballygunj Government School refused even to hear about the project and summarily dismissed the investigator on the ground that his teachers had no time to waste. So she had to include Hare School for Boys from further North. Similarly, St. Lawrence School, a Jesuit School for Boys had to be omitted from the list as the teachers had told the Father Rector that they were not interested in participating. St. Mary's School, another Roman Catholic School for Boys, was selected instead.

A few other Boys schools were not able to participate for one reason or another. The target of the investigator was to include 350 to 400 teachers in the study and to make the sample proportional by having equal numbers of male and female teachers. So in desperation she had to tap in-service students (deputed teachers from Calcutta Schools) from B.Ed. and M.A. Education Clases to get her quota.

As will be evident from the practical and administrative difficulties mentioned above, it was not possible to resort to probability sampling and the investigator had to take recourse to purposive sampling. However, care was taken to make the sampling representative, by giving due representation to different categories of

schools and to make the sampling balanced and proportional by having approximately equal numbers of male and female teachers.

All teachers of the selcted schools, having minimum three years of teaching experience were included in the study. The in-service students fulfilling the same condition were selected.

## 4.5.2 Institutions and Teachers Comprising the sample

TABLE 4.1 : List of Participating Institutions and Distribution of Sample

| Institution | N | |
|---|---|---|
| | Male | Female |
| **Government:** | | |
| Hare School (Boys) | 14 | - |
| Sakhawat Memorial Govt. Girls' High School | - | 30 |
| Calcutta Madrasah (Boys) | 16 | - |
| **Govt. Sponsored:** | | |
| Jodhpur Park Boys' School | 14 | - |
| Jodhpur Park Girls' School | - | 16 |
| **Bengali-medium Private:** | | |
| Jagadbandhu Institution (Boys) | 16 | - |
| South Suburban Branch School (Boys) | - | 15 |
| Kamala Chatterjee H. School for Girls | 9 | - |
| **English-medium Private:** | | |
| Pathabhawan (coeducational) | 5 | 17 |
| Ashok Hall Girls' High School | - | 15 |
| **Anglo-Indian (Roman Catholic):** | | |
| Loreto Day School, Eliot Road (Girls) | - | 17 |
| St. Mary's School(Boys) | 14 | 5 |
| **Anglo-Indian (Protestant):** | | |
| St. James School (Boys) | 20 | 4 |
| Pratt Memorial School (Girls) | 1 | 20 |
| The Assembly of God Church School(Coeducational) | 12 | 17 |
| St. Xavier's College B.Ed. Dept. | 18 | 2 |
| David Hare Training College | 20 | - |
| Jadavpur University M.A. Education Dept. | 21 | 7 |
| Total | 180 | 165 |
| | (345) | |

## 4.6.0 INSTRUMENT SELECTION

The present study took the form of a questionnaire survey and case study. Implicit in the design of the study was the assumption that teachers are able to provide valid reports of the sources of meaning and stress in their life and of a subjective appraisal of their circumstances.

The study utilised well-established standardised scales as well as items, inventories and interview schedule constructed by the investigator. the PIL and MBI are standardised instruments which have been most extensively used for the measurement of meaning and burnout. The rest were made by the investigator.

The following instruments were utilised in the study: (Appendix A)

1. Demographic data sheet
2. The Purpose in Life Test (PIL)
3. Single-item measure of self-reported meaning in life (SRM)
4. Sources of meaning in life inventory (MIL)
5. Sources of meaning in teaching inventory (MIT)
6. Teaching Stress Survey (TSS)
7. Single-item measure of self-reported teacher stress (SRS)

8. The Human Services Survey (Maslach Burnout Inventory) (MBI)

9. Interview Schedule for Case Study

### 4.6.1 Demographic Data Sheet

This requested biographical information regarding sex, age in years, marital status, qualification and length of full-time teaching experiences. The format consisted of multiplechoice class divisions.

### 4.6.2 The Purpose in Life Test (PIL)

The purpose in life test by Crumbaugh and Maholick (1969) was selected as the instrument to measure Viktor Frankl's concept of meaning in life. The reason for the selection of this test was that it was specifically designed to measure Frankl's concepts of existential vacuum and noogenic neurosis and it has been widely used for measuring the concept of meaning in life. In addition, it has been validated against the Frankl Questionnaire, the series of questions which Frankl developed to measure existential vacuum.

The PIL consists of three parts. Part A has 20 scaled Likert-type sentence stems, each with 7 response alternatives ranging from 1 (Low purpose) to 7 (High purpose). Descriptive terms are used as anchors for the extreme points 1 and 7 and position No.4 is considered neutral. For example:

I usually am

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| Completely bored | | | Neutral | | | Exuberant, enthusiastic |

Part B has 13 sentence completion items and Part C requires writing of a paragraph on personal aims, ambitions and goals. Part A is the only one which is treated quantitatively and has been the subject of most research efforts to date. Part B and C are not scored and little consideration is given them in either the manual or published research. (Braun, 1972; Domino, 1972)

The present study has utilised Part A of the instrument, the only part that has been validated.

**Scoring :** The PIL is a non-timed self-administering attitude scale and the total score is the sum of the numerical values circled for the 20 items, therefore, the score can theoretically range from 20 to 140. The direction of the magnitude was randomised for the items so that position preference could be minimised. (Crumbaugh and Maholick, 1964)

**Validity :** The construct validity of the PIL was supported by the correct predicting of the order of the means of four normal populations - successful business and professional personnel; active and leading protestant parishioners; college undergraduates; and indigent' non-psychiatric hospital patients. Braun (1972) criticises

this on the ground that the theoretical basis for predicting this order is not clear. Also, the difference between the means of the undergraduates and the indigent patients is surprisingly small (108.45 Vs 106.40). The PIL also distinguished significantly between patient and non-patient population and showed a consistent progression of scoring from the non-patient group that was considered to be highly motivated to the most seriously ill patient group. (Crumbaugh and Maholick, 1964)

Criterion validity was determined through a correlation between the ratings by ministers of their parishioners on the 'Ministers' Rating Scale' and the parishioners' PIL Scores. A correlation of .47 was discovered. Although this coefficient appears to be somewhat low, it has been pointed out by Ary, Jacobs and Razavieh (1979, p.200) that 'a correlation coefficient of .40 could be very helpful in cases for which no predictive instrument has previously been available'. In addition, according to Crumbaugh, 'these results are in line with the level of criterion validity which can usually be obtained from a single measure of a complex trait'. (1968, p.79)

A correlation of .68 was obtained between the PIL and the Frankl Questionnaire in a group of 136 patients and non-patients, thus offering evidence on construct validity. 'In general, most of the validity data presented are positive and support both the theoretical underpinnings of the PIL and its empirical functioning'. (Domino, 1972)

**Reliability :** Both test-retest and split-half reliability studies have demonstrated the adequacy of the PIL. Crumbaugh and Maholick (1964) reported a split-half reliability of .81 (N = 225) and a Spearman-Brown correction of .90 whereas Crumbaugh (1968) found a .85 (N =120) split-half reliability coefficient which was corrected to .92. Normative data has been based on 1,151 cases made up of both 'normals' and 'psychiatric' populations and the test has been validated for both types of populations separately (Crumbaugh, 1968). Domino (1972) concludes that the reliability of the PIL appeared satisfactory with reported odd-even reliabilities in the low 90's.

**Conclusion :** Braun (1972) concludes that when used with the caution necessary for any self-reporting device, the PIL may be useful for individual counselling and for group administration for research purposes.

The PIL substantially correlates with both Srole Anomie Scale and the MMPI Depression Scale, showing considerable overlap yet sufficient variance to allow the PIL to stand on its own. (Domino, 1972)

Domino (972) further comments, 'the PIL is thus an attempt to quantify a concept drawn from an important philosophical-therapeutic orientation which has often been criticised for its inherent vagueness and lack of empirical underpinnings; as such the PIL is a commendable effort'.

Yalom (1982) has criticised the PIL for having ambiguous wording and being value-laden but concludes that it is the only psychological instrument that has been used widely to study meaninglessness in a systematic manner.

### 4.6.3 Self-Reporting Item on Meaning in Life (SRM)

Degree of meaning in life was assessed by a single question - 'In general, how meaningful do you regard your present life to be?' to be rated on a 5-point scale ranging from 1 (Meaningless) to 5 (Extremely meaningful).

This was used as a validating meaure of the PIL and an alternative measure of meaning in life. Domino (1972) wonders whether a single item such as 'How meaningful is your life?' might not be as valid as the entire scale of PIL. This item was prompted by Domino's suggestion.

### 4.6.4 Sources of Meaning in Life Inventory (MIL)

An inventory for identifying the important sources of meaning in life was made by the investigator from review of research and the pilot study. The inventory consists of 14 items to be rated on four-points ranging from 1 (Not Important) to 4 (Extremely Important). Four points have been used instead of the more commonly used five points to counteract the tendency of the respondent to play safe by checking the middle or the neutral point.

The respondent is asked to indicate how important is each factor in giving his or her life meaning. A total count of response is obtained by adding the numerical values circled for the 14 items. So the total response score can theoretically range from 14 to 56.

This is also used as a validation of PIL and a measure of meaning in life. A high total would indicate a life which is more meaningful than a low total. A person who derives meaning from many and varied sources will have more meaning in his life.

### 4.6.5 Sources of Meaning in Teaching Inventory (MIT)

An inventory for sources of meaning in teaching was developed by the investigator with the object of identifying the positive aspects of the occupation of teaching, the factors which make teaching rewarding and meaningful. This would be complementory to the Teaching Stress Survey which seeks to identify the main stressors in teaching.

The inventory has 20 items which were developed following a review of the research literature, interviews with teachers and after applying them on 42 teachers in the pilot study.

The respondent is asked to rate how important each of the twenty factors is in giving his or her work (teaching) meaning.

The items are to be rated on 4-points ranging from 1 (Not Important) to 4 (Extremely Important). A total count of response is obtained by adding the numerical values checked for the 20 items. Therefore, the total count of response can theoretically range from 20 to 80.

A person's occupation is an integral part of his or her life. The degree of meaning one derives from one's occupation will determine the level of meaningfulness of one's life. So this inventory is also a supplement validation of PIL and a measure of general meaning in life.

### 4.6.6 Teaching Stress Survey (TSS)

A 55-item 4-point inventory was developed by the investigator to identify the predominant stressors in teaching. The respondent has to rate how great a source of stress each of the 55 items is for him or her. The response alternatives range from 1 (Little or No Stress) to 4 (Great Stress).

The items were selected after a careful consideration of the researches on teacher stress, discussions with teachers and were finalised after the pilot study.

A total count of response is obtained by adding the numerical values checked for the 55 items. Theoretically the total can ranges from 55 to 220.

### 4.6.7 Self-Reporting Item on Teacher Stress (SRS)

Stress experienced by teachers was assessed by a single question - 'In general, how stressful do you find being a teacher?' to be rated on a 4-point scale ranging from 1 (Not at all stressful) to 4 (Extremely stressful).

This single-item measure of self-reported stress was used to validate the TSS.

### 4.6.8 The Maslach Burnout Inventory (MBI)

The test form of the MBI is labelled Human Services Survey as it is important that respondents be unaware that it is a burnout measure. The inventory is presented as a survey of job-related attitudes for the human services - i.e. where one does 'people work'.

The MBI, constructed by Christina Maslach and Susan E. Jackson of University of California, Berkeley, was selected to measure the syndrome of burnout because it is the most popular and widely used scale in burnout research.

**Sub-Scales :** The MBI is designed to assess the three aspects of the burnout syndrome - emotional exhaustion, depersonalisation and lack of personal accomplishment. Each aspect is measured by a separate subscale. The Emotional Exhaustion Subscale assesses feeling of being over-extended and exhausted by one's work. The

Depersonalisation Subscale measures an unfeeling and impersonal response toward recipients of one's services, care, treatment or instruction. The Personal Accomplishment subscale assesses feelings of competence and successful achievement in one's work with people. Each subscale has two dimensions : Frequency (how often one has these feelings) and Intensity (the strength of these feelings).

The test was standardised on 1,025 samples with a 25-item form. Factor analysis yielded a four factor solution with three factors having eigen values greater than unity and these are considered the subscales of the MBI. This three factor structure has been replicatd with a sample of 469 teachers by Iwanicki and Schwab (1981). The fourth factor accounting for 3 items is not currently a subscale of the MBI as it requires further research.

There is a moderate correlation between the two subscales of Emotional Exhaustion and Depersonalisation, which is in accord with the theoretical expectations that these are separate but related aspects of burnout. The Personal Accomplishment Subscale is independent of the other subscales and its correlations with other subscales is quite low.

Correlation between the Frequency and Intensity dimensions across individual items ranged from .35 to .73, with a mean of .56. The results show a moderate

relationship. In addition, respondents often indicated that the two-dimension format allowed them to give a more differentiated response.

**Scoring :** The MBI is a 22-item Likert-type rating scale. Items are written in the form of statements about personal feelings or attitudes. The Frequency Scale is labelled at each point and ranges from 0 (Never) to 6 (Every day). The Intensity Scale ranges from 0 (Never) to 7 (Major, Very Strong).

For example:

8. I feel burned out from my work.

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|---|
| HOW OFTEN | Never | A few times a year or less | Once a month or less | A few times a month | Once a week | A few times a week | Every day |

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|---|
| HOW STRONG | Never | Very mild, barely noticeable | | | Moderate | | | Major, very strong |

There are 9 items in Emotional Exhaustion Subscale; 5 items in Depersonalisation Subscale; and 8 items in Personal Accomplishment Subscale.

Burnout is considered as Continuous Variable, ranging from low to moderate to high degrees of experienced feeling. It is not viewed as a dichotomous variable, which is either present or absent. A high degree of

burnout is reflected in high scores on the Emotional Exhaustion and Depersonalisation Subscales and in low scores on the Personal Accomplishment Subscale. A moderate degree of burnout is reflected on moderate scores on the three subscales. A low degree of burnout is reflected in low scores on the Emotional Exhaustion and Depersonaliation Subscales and in high scores on the Personal Accomplishment Subscale. In the scale, scores are considered high if they are in the upper third of the normative distribution, moderate if they are in the middle third and low if they are in the lower third. Given the limited knowledge about relationships between the three aspects of burnout, the scores for each subscale are considered separately and are not combined into a single total score. Similarly, the frequency and Intensity scores are considered separately. Thus 6 scores are computed for each respondent - EEF, EEI, DF, DI, PAF and PAI.

**Reliability :** Reliability coefficients were based on samples that were not used in the item selections to avoid any improper inflation of the reliability estimates. The reliability coefficients for the subscales ranged from .71 to .90.

Test-retest reliability of the MBI were obtained from a sample of 53, the two test sessions being separated by an interval of 2-4 weeks. The test-retest r coefficient for the subscales ranged from .53 to .82 - all significant

beyond .001 level.

**Convergent Validity :** Convergent validity was established in various ways - by correlating MBI scores with behavioural ratings made independently by a person who knows the individual well, such as a spouse or co-worker, by correlating MBI scores with Personal Asessment of Basic Job Dimensions part of the Job Diagnostic Survey (JDS) of Hackman and Oldham (1974, 1975); by correlating MBI scores with measures of various outcomes that were hypothetically related to burnout such as desire to leave one's job, taking frequent breaks and absenteeism, difficulties with family and friends, insomnia and increased use of alcohol and drugs. All three sets of correlations provided substantial evidence for the validity of MBI.

**Discriminant Validity :** This was obtained by distinguishing the MBI, firstly, from measures of 'General Job Satisfaction' measure of JDS - correlation was slight to moderate, accounting for less than 6% of the variance and hence, burnout cannot be accepted as simply a synonym for job satisfaction.

Secondly, to test if the MBI scores are subject to distortion by a social desirability response set because many of the items describe feelings that are contrary to professional ideals, MBI scores were correlated with Social Desirability Scale (Crowne-Marlow, 1964) Scores. None of the MBI subscales were significantly correlated

with the SDS at the .05 level.

The MBI being an easy to administer scale with good reliability and validity, has been successfully used in almost all the empirical studies on burnout.

### 4.6.9 Case Study Schedule

A four-part interview schedule was constructed - the first part dealing with early life, youth and educational career; the second part dealing with life as a teacher; the third part dealing with family life; the last part deals with goals, purposes and values held by the person.

## 4.7.0 DATA COLLECTION

Data collection of the present investigation was conducted in three phases.

**Phase I :** A pilot study was conducted on 42 teachers of two schools in Baroda city - Navrachana and the Convent of Jesus and Mary, to check the comprehensibility of the research tools, suitability of the items and the nature of the sample.

As a result of the pilot study, the wordings of few items of the MBI were changed or clarified.

**For example :** the word 'recipient' in the test was changed to 'student'. Item 2 - 'I feel **used up** at the end of the work day' was changed to 'I feel **exhausted** at the

end of the work day' as many teachers were not conversant with the idiomatic English expression, 'used up'. Similarly, the phrase 'at the end of my rope' (Itm 20) was clarified by including explanations in parentheses, (at the end of my endurance/at the end of my limit) after it.

The Teacher Stress Survey in the pilot study contained only 36 items. The teachers were requested to write down additional stressors which they experience but which had not been mentioned in the questionnaire. From their responses and further review of literature 19 additional items were included in the final form.

**Phase II :** The data used in the investigation was collected between mid-August 1983 and January 1984. Out of these five and a half months, however, teachers were not available for a couple of months during the Puja and Christmas vacations.

The investigator first contacted the Heads of the Institutions who introduced her to the teachers by calling a special meeting or during the lunch break in the staffroom. The investigator discussed with the teachers the purpose of the study and how the information could be collected. As they would never be free for one and a half hours at a stretch, all together, to complete the questionnaire in the presence of the investigator, which she had desired, they wanted to complete the questionnaire in their spare time at home or in the school.

The investigator was asked to come on an appointed date after a week to collect them. Only in one girls' school, Ashok Hall, she got the qustionnaires back on the appointed date. In all other schools, she had to make three to seven visits to collect them. With each respondent (with the exception of one school) the investigator checked the questionnaire to see if any item was left out. Unfortunately, always, either some one was absent, or had left the questionnaire at home or even had forgotten all about it! All this required a number of visits in each school.

In the B.Ed. and M.A. classes the subjects were made available for the required time and the questionnaires were completed in the presence of the investigator in one sitting.

Though the questionnaires were filled in anonymously, the investigator had to keep an identifying mark for locating the persons for subsequent case studies. And the fact that she personally collected the questionnaires from the teachers, did not keep the responses really anonymous. The investigator feels that this might have made the responses to some extent loaded by social desirability. On one boys' school the teachers wanted to put the questionnaires in sealed envelopes and leave them on the Secretary's table as thy did not want to risk any possibility of identification. As a result, a few questionnaires had to be rejected for incompleteness

and the investigator could not select anyone from this school for case study. Even though the investigator assured the teachers that these pieces of information would not be made available to the Heads or authorities and would be used simply for the purpose of research, she had a feeling that many were not fully convinced about the anonymity and this, to some extent, had influenced the responses.

At one point the investigator realised that she was not getting her quota of male samples for a number of reasons. Even in co-educational schools, number of female teachers were more than male teachers; boys' schools employed quite a few female teachers whereas girls' schools did not employ any male teacher (one girls' school had a lone male). This trend is a proof of gradual 'feminisation' of the profession even at the high school stage in urban areas. Therefore, the investigator had to collect her male subjects from the in-service B.Ed. and M.A. students from two training colleges and a university within the specified area.

**Phase III :** At this phase, the PIL and the MBI were scored, analysed and the extreme cases were located. Case studies of twelve selected teachers were made during the months of July to December, 1984 (except the period of Puja and Christmas vacations) and again from April to mid-May, 1985. The investigator had to meet each subj-

ect three to four times during his or her free periods in school to collect the information.

After this study, the investigator has come to the conclusion that teachers are the most difficult subjects of educational research. Their spare time after school is taken up by private tuition or housework and in school, by corrections of assignments and they are reluctant to accommodate any additional demands on their time.

Moreover, the prevailing mood of the teachers was generally one of despondency and pessimism. 'What's the use of all this?', 'Are your results going to produce any action?' - Such questions were repeatedly asked by them. Perhaps this was a reason for their lack of enthusiasm.

### 4.8.0 ANALYSIS OF DATA

For analysing the data, frequency, percentage and non-parametric statistics like Chi-square and Contingency Coefficient were used. The data was scored with the help of a hand calculator as well as the computer of the University Computer Centre.

The instruments utilised in the present investigation were Likert-type attitude scales. As Kerlinger (1973, p.425) points out, these are basically and strictly speaking, ordinal scales; they indicate with more or less accuracy not the amount of the traits, but rather

the rank order positions of the individuals and they do not possess the desirable characteristics of equal intervals.

The only information given by an ordinal scale is that of a progression from one end of the scale to another in distinct steps.

Burroughs (1971, p.66) suggests that the statistics available to users of ordinal scales include, in addition to those associated with nominal scales like Chi Square, Contingency Coefficient, all the non-parametric statistics associated with rank order. Burroughs further comments on the fact that all our educational continuous variables use the statistical procedures applicable to interval scaling while there are good reasons to doubt if one is justified in doing this. He says, 'the doubt applies ever more strongly to scores derived from questionnaires, attitude and attainment tests. Probably almost no educational or psychological data yield scores which are better than ordinal.' (Burroughs, 1971, p.67)

Secondly, initial analysis of the PIL and MBI scores showed a trend towards non-normal distribution. Skewed scores wee, however, expected from the nature of the variables studied. Garrett (1969, p.266) suggests that 'when data are badly skewed so that the assumption of normality is doubtful, 'parametric methods' are of dubious value or are not applicable at all'. Garrett

suggests non-parametric or distribution-free statistics as most useful when (1) N is small; (2) when assumptions (e.g. of normality) concerning the population are doubtful; and (3) when data can be expressed only in ranks.

In the present study N = 345 was not small but the scores showed trend towards non-normal distribution and 4, 5, 6, 7 point attitude scales were used. Therefore, non-parametric techniques were indicated.

Considering the various points discussed so far, the investigator decided to apply non-parametric measures like Chi-square and contingency coefficient which were the most appropriate techniques to find out the relationship between the variables like sex, age, etc. which were in the form of categories and the psychological variables like the PIL, MBI, Sources of Meaning, TSS etc. in which level (Low, Moderate, High) or category wise distributions were in terms of frequencies and not in terms of scores.

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