

CHAPTER - IV

METHOD AND PROCEDURE

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### METHOD AND PROCEDURE

The Present chapter deals with the nature of the study, objectives and hypotheses, the definitions 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 hypothesis 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 Mondfrans 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 at least 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 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, burnoutness and work orientation of teacher-educators of Orissa. The investigator did not attempt probability sampling but took the total population of teacher educators in Orissa as they comprise a section of total teaching community.

Furthermore, their population is quite approachable. The non-parametric statistical techniques and case studies have been used to analyse the data.

Burnout is a complex process, arising from individuals, organisational and societal factor; 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 burn-out 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 colleges in Orissa. 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 (census of intangibles). In the words of Kerlinger (1973), 'it focuses on people, vital facts of people and their beliefs, opinions, attitudes, motivations and behaviour'.

The present study attempts to survey teacher educators of Orissa. It attempts to relate their meaning in life to work-orientation and attempts to find out the factors leading to high in meaning in life score and low in meaning in life score.

#### 4.2.0 Objectives of the study

1. To identify the teacher-educators with high in meaning in life score, in order to study their differential work orientation and burnoutness.
2. To find out the relationship between meaning in life and work-orientation of teacher-educators of Orissa.

3. To conduct case studies of teacher-educators high on meaning in life score and low on meaning in life score and their respective burn-outness and work-orientation patterns with a view to developing individual profiles to find out factors affecting it.

#### 4.3.0 Hypothesis

In the light of the conceptual framework and related studies in relation to meaning in life, work-orientation and teacher burn-outness the following hypotheses have been formulated.

1. There exists significant positive relationship between meaning in life score and work orientation score of teacher-educators of Orissa.
2. Teacher-educators high in meaning in life will be showing achievement orientation in work orientation.
3. Teacher-educators low in meaning in life will be showing affiliation orientation in work orientation.
4. Teacher-educators high in meaning in life will be showing low burnoutness.
5. Teacher-educators low in meaning in life will be showing high burn-outness.

#### 4.4.0 Definition of terms

a. **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 relationships, gratifying experiences, important undertakings, missions or goals.

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

c. **Work-orientation**

Work-orientation refers to the perception and the way a person works in his work place. In this study, it refers to, teacher-educators perception of their work and the way they do work at their work place. As mentioned in chapter-II, Work-orientation of teacher-educators has been classified in to two categories:

- (i) Achievement orientation
- (ii) Affiliation orientation

(i) **Achievement Orientation**

This orientation refers to organised work methods, general attitude to working and the achieving as the main component. For individuals high in this orientation, achieving is all important and would try all means of reaching their set goals. They internalise work values with an emphasis on intrinsic motivation. They try to find meaning in what they are doing and having no boundaries within which they will work. They set their own standards and directions for work and prefer freedom from close supervision. The teacher educators high in this orientation will be regarded as achievement oriented in work.

(ii) **Affiliation orientation**

This orientation refers to the extrinsic motivation and

and fears of failure and doing just what is required, looking at work as a means to an end. Individuals high in this orientation work for satisfying the person or institution to whom they affiliate. They work for social status or prestige. Their work is predominantly ritualistic in nature and they wait for direction to work. Teacher educators high in this orientation will be regarded as affiliation oriented in work.

#### d. **Teacher-Educators**

Educators working in teacher training colleges, who educate the student - teachers are regarded as teacher educators. They prepare teachers for secondary schools. So in this study the educators working in teacher training colleges meant for preparing secondary school teachers are known as teacher-educators.

#### 4.5.0 **Sample**

The teacher-educators of all the government training colleges, Regional college of Education and private training colleges of Orissa consists the sample.

There are six Government Training Colleges (Now two of them become I.A.S.E's and 3 are converted to C.T.E's), One Regional College of Education and thirteen private training colleges in the state. In those training colleges 307 teacher educators, were working. In the present study all of them were taken as subjects except 37 teacher educators, the reason being that some of them were on leave or absent on the days of data collection - in their institutions.

#### 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 teacher educators are able to provide valid reports of the factors contributing towards meaning in life and burnoutness.

This study utilised well-established standardised scales as well as inventories and interview schedule constructed by the investigator. The purpose in life test and Maslach Burnout inventory are standardised instruments which have been most extensively used for the measurement of meaning in life and burnout. The work orientation inventory developed by Indiresan (1986) has been used after adoption to measure work orientation of teacher educators. The following instruments were used in the study: (Appendix A)

1. Demographic data sheet
2. The Purpose in Life Test
3. The Human Services Survey (Maslach Burnout Inventory)
4. The work orientation inventory
5. 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 (1972) 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; such as 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 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.

**Subscales :** 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 replicated 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).

8. I feel burnt out from my work.

	0	1	2	3	4	5	6
<b>HOW OFTEN</b>	Never	A few times a year or less	Once a month	A few times a month	Once a week	A few times a week	Every day
<b>HOW STRONG</b>	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 Depersonalisation 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 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 Assessment 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

.05 level.

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

#### 4.6.4 Work-Orientation Inventory

The Work-Orientation Inventory developed by Indiresan (1986) was used to measure the work orientation of teacher educators after establishing its reliability and validity. The original inventory was developed for managers. Hence, the investigator modified it for the present study.

**Reliability :** The test-retest method was used by the investigator to find out its reliability. The coefficient of correlation was found to be .78 in between the two trials on a sample of 60 teacher educators indicating a high reliability of the test.

**Validity :** The construct validity of the inventory was supported by the correlation between the two subscales providing evidence for the theoretical construct for which the inventory was made.

The intercorrelations between the two subscales are given below.

**Table: 4.1 Correlation between the two subscales**

	Achievement orientation	Affiliation orientation
Achievement orientation	.743	-.674
Affiliation orientation	-.674	.726

It is evident from the Table 4.1 that both the subscales are negatively related with each other whereas a positive relationship exists in between achievement orientation with achievement orientation subscale and affiliation orientation with affiliation orientation subscale.

**Scoring :** It is a Likert-type rating scale to be rated on a 4 -point scale for two types of orientation. The scores for each subscale are to be considered separately. A high score in any of the sub-scale indicates stronger orientation in that work orientation. The items belonging to sub-scales are mentioned in Appendix.

#### 4.6.5 Interview Schedule

A four part interview schedule was constructed - the first part dealing with family background; second part dealing with education; third part dealing with work style and the last part deals with social relationships of 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 60 teacher educators selected at random from four teacher training colleges of Orissa. The work orientation inventory was administered on them and after a gap of sixteen days the inventory was re-administered. The data was scored and test-retest reliability and inter correlation between the sub-scales was established.

**Phase II :** The investigator started his data collection after the final adoption of work orientation inventory. The investigator went to each teacher training college, stayed there and administered the instruments selected for the study. It took two months i.e. August, 88

to October, 88, to complete the data collection. The investigator collected the staff list containing the names of teacher-educators in each training college and had kept an identifying mark on each questionnaire for locating the persons for subsequent case studies as the questionnaire were filled in anonymously.

**Phase III :** At this phase the PIL, the MBI and the work orientation inventory were scored, analysed and the extreme cases were located. Case studies of eight selected teacher educators were made during the months of february, 89 to April, 89; and May, 89 to June, 89. The investigator had to meet each subject thrice to gather requisite information - by using interview schedule and interaction with them.

#### 4.8.0 Analysis of Data

For analysis of data, frequency, percentage and non-parametric statistics like chi-square test and contingency coefficient, 't' test were used. Scoring as well as computations were done manually.

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. He further comments on the fact that all our educational continuous variables use the statistical procedures applicable to interval sealing while

there are good reasons to doubt if one is justified in doing this. He says, 'the doubts 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 we, 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'. He 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  $N= 270$  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-squares and contingency co-efficient which were the most appropriate techniques to find out the relationships between the variables.