

## 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 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 eighty 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 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 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 make a comparison between, 'glow-on' and 'burn-out' Tribal and Non-Tribal teachers of High schools in Chotanagpur on Meaning in Life, Self-Concept, Work Value and Achievement Motivation. Therefore, the investigator did not attempt probability sampling but planned to select a typical sample from 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 inherent weaknesses of such measures. The causes of burnout are varied, complex and interrelated and cannot be determined fully or completely by such instruments.

Similarly, for any one remaining motivated, 'glowing-on' and active, a number of individual, organisational and societal factors could be responsible.

The limited generalisation that can be made from this study is about other teachers of similar types of schools in Chotanagpur. Several such proximal studies undertaken for different groups of teachers may ultimately lead to

findings that could be more widely generalised.

The present study is also a descriptive survey research which seeks to find answers to problems through the analysis of causal relationships. It seeks what factors are associated with occurrences, conditions and types of behaviour in glow-on and burnout.

In spite of its limitations, this survey research has been adopted in the present study 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 etc., related in some manner to psychological variables which include opinions, attitudes and behaviour are also included.

The researcher here attempts to study teachers from selected representative groups comparing tribals with non-tribals. It attempted to relate biographical, sociological variables of opinions, feelings, perceptions and attitudes of teachers about the meaningfulness of their life and work, and self-concept achievement motive and burnout experienced by them in their occupation.

#### 4.2 OBJECTIVES OF THE STUDY

The study focussed on the following objectives :

1. To identify the levels of 'glow-on' and 'burnout' teachers in the High Schools of Chotanagpur.
2. To study the Glow-on and Burnout Teachers in relation to the selected independent variables like (i) sex, (ii) Age, (iii) Marital Status and (iv) Teaching Experience.
3. To identify the levels of (i) meaning in life (ii) Self-Concept, (iii) To study Work Values, and (iv) Achievement Motive of the sampled teachers.
4. (A) To Compare the Tribal and Non-Tribal 'Glow-on' teachers with regard to the selected psychological Correlates of meaning in life, self-concept, work values and achievement motive.
5. (A) Similarly to compare the Tribal and Non-Tribal burnout teachers on the same four correlates.  
(B) To study the correlation between Frequency and Intensity of the Glow-on and burnout Teachers.
6. To make case studies of Ursuline High Schools in order to findout the causes of 'glow-Onness' and 'burn-outness' of teachers.

### 4.3 HYPOTHESES

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

#### 4.3.1 Objective 2

To study objective 2 the following hypotheses were formulated and tested.

1. There will be no significant difference between the 'Glow-on' male and female teachers on Personal Accomplishment Frequency and Intensitywise.
2. There will be no significant difference between the 'Glow-on' teachers grouped age-wise on Frequency and Intensity-wise.
3. There will be no significant difference between the 'Glow-on' teachers on the basis of their marital status on frequency and intensity-wise.
4. There will be no significant difference between the 'Glow-on' teachers on the basis of their teaching experiences on frequency and intensity-wise.
5. There will be no significant difference between male and female 'burn-out' teachers on the Emotional Exhaustion Frequency and Intensitywise.
6. There will be no significant difference between the sampled burnout teachers on the basis of their age on Emotional Exhaustion Frequency & Intensitywise.

*From 2  
hypotheses?*

7. There will be no significant difference between the sampled burnout teachers on their level of burnoutness on the basis of the marital status on Emotional Exhaustion Frequency and Intensitywise.
8. There will be no significant difference between the sampled 'burnout' teachers on the basis of their teaching experience on Emotional Exhaustion Frequency and Intensitywise.
9. There will be no significant difference between male and female sampled burnout teachers on Depersonalisation Frequency and Intensitywise.
10. There will be no significant difference between the sampled burnout teachers on the basis of their age on Depersonalisation Frequency and Intensitywise.
11. There will be no significant difference between the sampled burnout teachers on the basis of their marital status on Depersonalisation Frequency and Intensitywise.
12. There will be no significant difference between the sampled burnout teachers on the basis of their teaching experience on Depersonalisation Frequency and Intensitywise.

To study Objective 4 the following hypotheses were formulated :

13. There will be no significant difference in the

levels of meaning in life of 'glow-on' tribal and Non-Tribal teachers.

14. There will be no significant difference in the levels of self-concept of the "glow-on" tribal and non-tribal teachers.
15. There will be no significant difference in the levels of Achievement Motive of the 'glow-on' tribal and non-tribal teachers.

To study Objective 5 the following hypotheses were formulated :

16. There will be no significant difference in the levels of meaning in life of sampled Burnout Tribal and Non-Tribal teachers on Emotional Exhaustion subscale.
17. There will be no significant difference in the levels of meaning in life of sampled burnout tribal and non-tribal teachers on Depersonalisation subscale.
18. There will be no significant difference in the levels of self-concept of sampled burnout tribal and non-tribal teachers on Emotional Exhaustion sub-scale.
19. There will be no significant difference in the levels of self-concept of the sampled burnout tribal and non-tribal teachers on Depersonalisation sub-scale.
20. There will be no significant difference in the levels of Achievement Motive of the sampled burnout tribal

and non-tribal teachers on Emotional Exhaustion sub-scale.

21. There will be no significant difference in the levels of Achievement Motive of the sampled burnout tribal and non-tribal teachers on Depersonalisation sub-scale.
22. (a) There will be no significant relation between the frequency and intensity of the glow-on tribal and non-tribal teachers.  
  
(b) There will be no significant relation between the frequency and intensity of the burnout tribal and non-tribal teachers.

#### 4.4 DEFINITIONS OF TERMS

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

##### 4.4.1 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. Burnout is manifested in the frequency and intensity of emotional exhaustion, depersonalisation and lack of personal accomplishment. There is no total burnout score.

##### 4.4.2 Glow-on

'Glow' is defined by the Reader's Digest Great Encyclopaedic Dictionary as 'being heated to incandescence,

throw out light and heat without flame, shine like thing intensely heated; show warm colour, burn with bodily heat or emotional fervour.

Hence as opposed to the accepted term 'burn-out' 'glow-on' is here applied to those teachers who are enthusiastic, energetic, active, alive and personally motivated in their work as teachers and who refuse to be overcome by the burnout syndrome.

#### 4.4.3 Tribals

By tribals here is meant the original inhabitants of the area of Chotanagpur. The term refers to the five numerically larger groups of tribals of Bihar out of thirty-one classified. These are the Santhals, Ho, Munda, Oraon and Kharia tribes.

#### 4.4.4 Tribal Teachers

Tribal teachers refers to teachers who are tribals from the five group mentioned above and are teaching in the High Schools and not to those teachers who are teaching tribal children.

#### 4.4.5 Chotanagpur

This is the Southern hilly plateau area of Bihar. It consists of twelve districts together with Santal Parganas. In the South Chotanagpur the districts of Ranchi, Gumla, Lohard<sup>a</sup>ga, and Singhbhum are included.

#### 4.4.6 High Schools

High Schools are schools with classes VII to X. Teachers teaching in the Primary sections (classes I to V) or Middle Schools (Classes I to VI) were not included in the study.

#### 4.5 THE SAMPLE

Selection of appropriate sample is an important aspect of the research work. Generally random sampling is taken for research. A random selection procedure is one in which every element in the population has an equal chance to be selected for the sample and therefore every possible sample of a certain size is equally probable. Because of this the selection process is bias free. No doubt then that researchers utilize it most. There is no way in which any factor or tendency can affect who is chosen, for random procedures leave this to chance alone.

One random-selection procedure widely known is the "fishbowl technique" in which slips of paper representing each element in the population are placed in a fishbowl and a sample selected by reaching in and selecting a slip. The number of the slip is recorded and dropped back in the fishbowl and after shaking it another slip is drawn and so it continues until the desired sample is obtained.

#### 4.5.1 The Selection of Schools and Teachers

In accordance with the original plan, the sample for this study was the whole population of Ursuline High School teachers as the researcher had intended to concentrate her study of the teachers engaged in Ursuline High Schools. However, it was thought better later on, that other teachers from schools of other managements be taken as well. The reasons were that the teachers from Ursuline schools alone would not have brought the sample desired by the researcher. And secondly the <sup>2</sup>comparisons would be of higher quality between the teachers under Ursuline management and those from other management.

Consequently, from the very beginning the investigator decided against random sampling of schools and teachers for a number of reasons.

As it has been stated in the beginning of this chapter in section 4.1(2) that the present study is proximal and time specific and context specific in nature, random sampling was not called for.

There were some important practical reasons for not attempting to go for random sampling.

The purpose of this study was to make indepth and detailed information of Ursuline High schools, especially of those where proper environments for 'glow-on' teachers

are available and of others where due to lack of these the 'burn-outness' is caused. And of those teachers being affected intensely, moderately and mildly on either end of 'burn-outness'. Hence the selection was based on proportionate sampling. Teachers of the Ursuline High Schools were taken to make up the 50 per cent of the sample. The teachers from the Government High Schools then constituted the quarter per cent and the second quarter per cent was completed by teachers from other minority and privately managed schools. This proportion thus represented various other non-Ursuline managed schools and teachers. It facilitated the comparison of the schools with proper, convenient atmosphere for the teachers.

The investigator procured the list of High schools from the Education Department of the Government of Bihar. In the whole of South Chotanagpur they number more than 1000. And she received the number of Ursuline schools of the area from the Education in-charge of Ursuline schools which numbered fourteen and two no-recognized schools.

Even with all the transport facilities possible, it would have been impossible for the investigator to collect the data information from the randomly selected sample of those recalcitrant teachers. So with the meagre facilities, the work was heavier still. And the distance of these schools (Ursuline) is such-one at the one end in the East

of South Chotanagpur and the other in the other end in the West and South - that it would have been near impossibility for data collection for the investigator. Hence the Government schools were randomly selected from the proximity of the Ursuline High Schools.

Being aware of the nature of the data to be collected, the investigator was very particular about the rapport to be established between the heads of the institutions and with the teachers. Therefore, she had decided against mailing the questionnaires to teachers of selected schools and also because of the strong possibility of lack of response from many schools. There was 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 has shown, that teachers perceive events related to their occupation in similar ways. That is, regarding sex, age, race, type of school and so on, teachers share common perceptions regarding fatigue associated with teaching at least teachers in the same social milieu (Cichon and Koff, 1978).

The present study includes schools from Chotanagpur

both of Ursuline Management and government as well as other management in the proportion of percentage referred already. The investigator felt that selection of schools from a wide area of South Chotanagpur would not make any significant difference in the findings. The management of the majority of the schools (Ursuline) having very similar control, there could be little difference in the organisational factors excepting the leadership factors in the experience of burnout by teachers or in remaining 'glow-on'.

Studies (Carveth, 1983) have revealed the effects of the specified leader behaviour variables on teacher burnout on the three subscales of the Maslach Burnout Inventory (MBI). It means the behaviour of the leader has much effect upon leading teachers to experience burnout or in keeping them 'glowing-on'.

The teachers employed in Ursuline schools do not all belong to their own locality. These teachers therefore may have attitudinal differences on the basis of their background as males or females or of the caste or race or of teachers in English Medium and Hindi medium schools but as teachers of these schools. The geographical location of schools would not be a significant factor in the study.

As far as the teachers of Government schools are concerned, the selection does not make much difference.

These teachers are meant to be aids in facilitating the comparison of teachers particularly of the Tribals with non-Tribals. Ursuline Schools being mostly Girls' Schools, male teachers are scarce in them. The other schools had to be tapped for the proper comparison of teachers.

The investigator had to make certain changes in the initial list prepared. For instance the investigator had included all the Ursuline High Schools of South Chotanagpur. But the teachers of the Ranchi Ursuline School could not be convinced either of the confidentiality involved in or the purpose of the study and so, they, influenced by the two dominating members of the staff, returned the questionnaire. The Principal could not exert her influence or authority over them. The investigator was surely disappointed as this school is the biggest of all the Ursuline schools with a large number of teachers. With its exclusion the number of teachers from Ursuline schools would be minimised.

Similarly, the Government Schools in the proximity of Ursuline schools could not all be taken. The target of the investigator was to include a total of 300 teachers in the study and make the sample proportionate by having equal numbers of male and female teachers. As mentioned earlier, the Ursuline Schools being mainly for girls', it

was necessary to select the few government Boys' Schools with male majority of teachers as well as Schools having non-tribal teachers. In this last effort of procuring male teachers, the investigator had to be satisfied with a fewer male teachers due to the drop out of one major Ursuline School, the number of the teachers from non-Ursuline schools had to be proportionately less.

As will be evident from the practical and administrative difficulties as well as from the nature of the research mentioned above, it was not possible to resort to probability sampling. The investigator had to take recourse to purposive sampling. However, care was taken to make the sampling representative, by giving due representation to the different categories of schools and to having approximately equal numbers of male and female teachers.

Due to the specific nature of the study, all the teachers of selected schools without limiting the number of years of teaching experience were included in the study. Thus it includes also teachers with one year experience.

#### 4.5.2 Institutions and Teachers Comprising the Sample.

The number of institutions selected and teachers comprising the sample is being presented in Table 4.1.

Table 4.1 : List of participating Institutions and Distribution of Sample.

Code no.of School	Sl. No.	Institutions	N	
			Male	Female
UM-01	1.	Ursuline Girls' High School, Muri.	1	5
UEM-02	2.	Ursuline English Medium School, Muri.	2	7
IM-03	3.	Indal High School, Muri.	6	1
UK-05	4.	Ursuline Girls' High School, Khunti.	1	11
GHK-06	5.	Government Girls' High School, Khunti.	1	5
CHC-07	6.	Carmel High School, Chakradharpur	1	5
USJ-08	7.	Ursuline Girls' High School, Jampani.	1	8
USR-09	8.	Ursuline Girls' High School, Rengarih	3	8
BSE-10	9.	State Subsidised High School, Khunti.	8	-
NSD-11.	10.	Nirmala High School, Dorma.	5	3
USS-12	11.	Ursuline Girls' High School, Samtoli.	2	13
KPS-13	12.	Kanya Pathshala, Simdega.	-	8
KHS-14	13.	Khuntitoli High School, Simdega.	8	1
USH-15	14.	Ursuline Girls High School, Hesag	1	5
USN-16	15.	Ursuline Girls' High School, Konbir Noatoli	2	10
PTS-17	16.	Prabhat Tara School, Dhurwa	1	3
USG-18	17.	Ursuline Girls' High School, Gumla	2	17

cont...

Table 4.1 (contd.)

Code No. of School	Sl. No.	Institutions	N	
			Male	Female
LSG-19	18.	Lutheran High School, Gumla.	1	1
SSG-20	19	State Subsidised High School, Ghaghra.	3	-
PSG-21	20.	Project High School, Ghaghra.	-	5
MSL-22	23.	Manjurmati High School, Lohardaga	6	1
UST-23	24.	Ursuline Girls High School, Tongo	-	9
USL-24	25.	Ursuline Girls High School, Lohardaga	2	10
SMJ-25	26.	St. Mary's Eng. Medium School, Jamshedpur.	1	9
CHL-26	27.	Chunilal High School, Lohardaga.	8	2
SAR-27	28.	St. Aloysius High School, Ranchi	5	1
			72	148

#### 4.6 INSTRUMENT SELECTION

The present study has taken the form of a questionnaire survey and case study of the 'glow-on' and 'burn-out' teachers. It was assumed in the design of the study that teachers are able to provide valid reports of the meaning in their life and of subjective appraisal of their circumstances.

The study utilized well established standardized scales as well as items and inventories and checklists constructed by the investigator. The PIL and MBI are

standardized instruments which have been most extensively used in Western countries for the measurement of meaning and burnout. The S.P.I., W.V.I. and T.A.T. were used to measure self-concept, Work Values and Achievement Motivation of the subjects.

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

1. Demographic Data sheet.
2. The Human Services Survey or Maslach Burn-out Inventory (MBI).
3. The Purpose in Life Test (PIL)
4. The Self-Perception Inquiry (SPI)
5. Work Value Inventory (WVI)
6. Thematic Apperception Test (TAT)
7. Checklist : (a) For Managers and Principals  
(b) For Teachers.

#### 4.6.1 Demographic Data Sheet

This included biographical information regarding sex, age group in years, marital status, Tribal/Non-Tribal status, academic qualifications and length of full-time teaching experience, the pay-scale they are receiving and the social status etc.

#### 4.6.2 The Maslach Burnout Inventory (MBI)

The test form of the MBI is labelled the Human Services Survey as it is important that the 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 the 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, Depersonalization and lack of personal accomplishment. Each aspect is measured by a separate subscale. The Emotional Exhaustion Subscale assesses feelings of being over-extended and exhausted by one's work. The Depersonalization subscale measures an unfeeling and impersonal response towards 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 depth of these feelings).

The test was standardised on 1,025 samples with a 25 item form. Factor analysis yielded 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) and a sample of 215 school psychologists (Aronin & Kubelun, 1981). The fourth factor accounting for three 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 Depersonalization, which is in accord with the theoretical expectations that these are separate but related aspects of burnout. The subscale of Personal Accomplishment 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 or 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 notice- able			Moderate			Major, Very strong

There are 9 items in Emotional Exhaustion subscale, 5 items in Depersonalization 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 Depersonalization 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 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 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, DFDI, PAF and PAI.

Personal Accomplishment of MBI as measuring tool for Glow-on.

The Personal Accomplishment subscale of MBI assesses feelings of competence and successful achievement in One's work with people (Manual, p.1 appended). For instance statement<sup>9</sup>/of the inventory says 'I feel 'I am positively influencing other people's lives through my work' and Statement 12 - 'I feel very energetic' are clearly positive statements which give a sense of accomplishment. Hence the 8 items of the Personal Accomplishment subscale have been reversed in assessing the Glow-on Teachers. The lower third scores in this subscale have not been utilized to consider low burnoutness but low-glow-on teachers.

According to the nature of the MBI the Personal Accomplishment or Glow-on is conceptualized as a continuous variable, ranging from low to moderate to high degrees of experienced feelings. It is not viewed as a dichotomous

variable which is either present or absent. Therefore, a high degree of Glow-on is reflected in high scores both in frequency and intensity. A moderate degree of Glow-on is reflected in moderate scores and a low degree of Glow-on is reflected in low scores on this subscale both in frequency and intensity dimensions.

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. The scores are considered separately and not combined.

The Personal Accomplishment subscale has 8 items in it and it can be easily accomplished in 5 to 10 minutes to fill out. It has both frequency and intensity dimensions - the former (how often) ranges from 0 to 6 and the latter (how strong) ranges from 0 to 7. The respondents have to respond on both dimensions.

**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.

The 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 reliability coefficient for the subscales ranged from .53 (Intensity)

to .82 (Frequency) - 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 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 per cent 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 SDS at .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.

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

The Purpose in Life test by Crumbaugh and Maholick (1969) was selected as the instrument to measure the degree to which a person experiences a sense of meaning and purpose in his daily life. The scale is based on Frankl's (1946, 1980) theses that when meaning in life is not found, the result is 'existential frustration' (or among mental patients' noogenic neurosis). This test has been validated against the Frankl Questionnaire, the series of questions which Frankl developed to measure existential vacuum.

The PIL consists of 20 items (of Part A) seven point Likert-type scale extending from one extreme of feeling to its opposite kind of feeling. The seven responses range from 1 (Low purpose) to 7 (high purpose) (See Appendix A). 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

Out of the three parts (A, B, C), 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 utilized 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 (Low PIL) to 140 (High PIL). The direction of the magnitude was randomised for the items so that position preference could be minimised. (Crumbaugh and Maholick, 1964). Numerically higher scores reflect increased purposefulness or self transcendence.

#### 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 Maholic, 1964).

Criterion validity was determined through a correlation between the ratings by ministers, of their parishioners on the 'Minister' 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 PII and its empirical functioning'. (Domino, 1972).

#### Reliability :

Both test-retest and split-half reliability studies have demonstrated the adequacy of the PII. 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 'psychic' populations and the test has been validated for both types of populations separately (Crumbaugh, 1968). Domino (1972) concludes that the reliability of the PII 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 selfreporting device, the PII may be useful for individual counselling and for group administration for research purposes.

The PIL substantially correlates with both Srole Anomic 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; 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.

#### 4.6.4 The Self-Perception Inquiry (SPI)

The Self-Perception Inquiry was used to measure the self concept of students. It was also used for the teachers. Pizer prepared this tool which was developed by Sarabhai (1976) to be used in India.

- (a) The technique was in the form of essay writing. The subjects were expected to write about themselves in the given forms of "Who Am I"?
- (b) The various sub-sections provided for them were :

Section 1 - Who Am I?

Section 2 - Myself and My Home.

Section 3 - Myself and My Institution.

Section 4 - Myself and My Community

Section 5 - Myself and My Nation

Section 6 - Myself and My Happiness

Section 7 - Myself and My Teaching Work.

There could not be any time limit for such a long information required from the subjects. So they were left free to complete the same when they could avail time for the same.

(a) "Who Am I" Test : The 'Who Am I' formed the first Section of the SPI. It was used as a projective test, with the specific purpose of measuring the self-concept of SS in terms of orientation towards activity and efficacy.

Most measures of the self-concept in current use in India, are of verbal adjective list type where results have consistently shown that the social acceptability bias is very strong (Deo, 1964). Also the verbal scale used generally tends to probe more social masculine - feminine role adjectives rather than the action orientation or the personality resource awareness of an individual. Pareek and Rao (1975) have stressed the importance of the use of a projective technique such as the 'Who Am I' in getting a meaningful measure or idea of the individual's self-concept.

The scoring of the 'Whom Am I' test is based on Pizer's system of scoring indicated in Pizer's Sense Efficacy scale (McClelland and Winter, 1969). Sarabhai (1976) used this test and modified Pizer's scoring system as she found that the system failed to measure self concept of Indian students. Pizer's system consists of a series of categories which try to measure the strength and character of an individual's goal oriented behaviour as manifested by him in any projective type of written material. The scoring system is so designed that an individual who manifests greater drive and independence, and a greater sense of purpose derives a higher score than one who shows purposelessness or vagueness and ambiguity about ambitious or goals or doubts about personal capabilities : Pizer's Scoring system is as follows :

1. Goal : Being Versus Doing.

Activity Goal : Activity goal is scored if the goal is described in terms of action or doing (scored +1).

Example : I want to act in films.

Essence Goal : Essence goal is scored if the goal is described in terms of attaining a sense of being (scored-1).

Example : I want to be an actress.

2. Locus of Resources :

Internal : Internal resources are scored when a person describes himself as capable, competent and able to control

a situation by innate abilities (scored +1).

Example : I am certain that I will be successful.

External : External resources are scored when the outcome is described as being dependent on the resources of others (scored-1).

Example : I can't do well in exams because nobody helps me.

Lack : Lack of resources is scored when a person explicitly states that he lacks specific capabilities relevant to the situation (scored-1).

Example : I couldn't take part because I did not have enough money.

### 3. Global stage

Global stage is scored if the individual defines himself in ambiguous, vague, metaphysical terms as with the use of the words : World, Universe, Life, etc. (Scored-1).

Example : I am a tiny drop in the ocean of life.

### 4. Initiative Versus Compliance.

Initiative : Initiative is scorable when the individual takes pro-active action, starts the ball rolling or is originator of action (Scored +1).

Example : I have started going to the community Science Centre so that I might expand my knowledge of Science.

Compliance : Compliance is scored when the action is

reactive and the problem is defined for the individual by others (Scored-1).

Example : I listen to everything my parents tell me to do.

#### 5. Problem-solving Versus Problem-Avoidance.

Problem-Solving : Problem-solving is scored if there is an attempt on the part of the individual to clarify or specify logical sequential connections within a sentence, by the use of cues like: If, so that, since, etc. (Scored 1).

Example : As I found concentration difficult at home, I now study in the school library.

Problem Avoidance : Problem-avoidance is scorable if the individual becomes depressed or apathetic when faced by a problem, gives up or gives in, suffers, wants to escape, or describes himself as a 'gentle Jesus type' possessing 'conflict-avoiding' personal qualities, gentle, non-critical, loving good natured (scored 1).

Example : I am friendly and never like to criticize people.

Having decided to adopt Pizer's scheme for scoring the 'Who Am I' test, Sazabhai used the scale for initial scoring of a pilot sub-sample. It was found that there were certain limitations in the break up of categories in this measure that made it somewhat inadequate for children in our culture.

A scrutiny of the scoring patterns of the children's subsample highlighted several major problems:

1. The test was preceded by a set of written instruction, giving guidelines to the subjects in respect of what to write. The instructions explicitly mentioned the words 'goals and problems'. In keeping with the guidelines all the Ss mentioned both goals and problems. The mere mention of a goal, therefore, ceased to signify higher efficacy or greater foresight and future directedness.
2. Pizer's criteria for distinguishing between an Activity Goal and an Essence Goal were based on the usage of English language, being determined by the use of the verb 'to do' or 'to be' respectively. The scoring pattern of children in the sub-sample showed that over 95 per cent of all respondents used the 'to be' and therefore got scored for 'Essence Goal': Goals nearly always got mentioned in the form : 'I want to be a doctor' rather than 'I want to do medicine'.
3. Of all Ss scoring Pizer's 'compliance' category, two distinct sub-groups emerged, one in which compliance was scorable because of a high identification with the family and parental values, and the other, in which it was scorable because of a commitment to larger societal goals such as service to the nation, or to the humanity. These two groups seemed to be committed to two very different objectives; further their commitments seemed to have been made after thorough comparison between self values and social needs.

4. Only one of the initial sample scored mentioned a statement that could be scored for problem-solving as defined by Pizer. Most other similar statements seemed to fall more appropriately into the category of initiative.

5. A fair number of initial sample got a score of zero on sense of Efficacy as a result of their "Who Am I" is not containing any identifiable category. Another large group, however, also ended up to zero, in spite of having scored several categories : this problem arose because of the  $\pm 1$  protocol that Pizer followed. The final score then allowed no way of differentiating between those subjects who scored a number of categories and were considered to have a greater degree of 'Self definition', from those who scored no categories. It was felt that this protocol could lead to very misleading results.

In looking at the overall adequacy of Pizer's system, Sarabhai decided that another system should be developed, based on Pizer's general format and categories, deleting those felt to be somewhat ambiguous and adding new ones where required. Thus the new scoring system was developed through a combination of simple empirical searching for differences, application of a priori ideas of what 'self definition' was, and then modifying these a - priori ideas in the light of the actual differences that emerged from the WAIs of the sub-sample.

### The New Scoring System for Self-Definition.

The New System differed from Pizer's in the following ways :

1. The Activity and Essence Goal categories were merged and changed into 'goal oriented activity'.

An explicit goal had been asked for in the guidelines preceeding the 'Who Am I' : the mere statement of goals, in whatever form, no longer differentiated the 'active' from the 'Passive' subjects. It was felt that what would differentiate these people was in extent of elaboration in relation to the goal statement.

2. The orientation for scoring lack of resources were maintained but the category was renamed 'Awareness of Block-Personal'. It was felt that those subjects who showed an awareness of the resource function within themselves by identifying a specific lack, were considered to have a better conception of efficacy than those who were unable to do so. This, therefore, was a strength, in as much as it meant greater awareness of personal abilities and an accurate and non-self-deluding picture of personal limitations.

3. The compliance sub-category was broken up into two :-  
(a) Parental Dependence, and (b) Societal Commitment.
4. The 'problem-solving' sub-category was omitted as

it did not seem relevant, nor capable of furthering the understanding of efficacy in a young sample.

5. The scoring protocol was changed completely. The categories presumed to be more 'positive' in the relevant sense, if present, were given a score of +2, if absent, they were scored 0. The rest of the categories, those with a 'negative' quality, were scored 0, if present, and +1, if absent. The scores thus ranged between 0, (0 being obtained only by those individuals in whom no category was scorable and 14.

The criteria and the sub-categories of the new self-definition measure are given :

New Self-Definition Measure.

1. Goal Oriented Activity

Goal Oriented Activity is scored when the goal is not only stated but is followed by any activity indicated (whether overt or covert) on the part of the subject, as a means to achieve the goal.

Score : If present +2, if absent 0.

Example : (a) I want to become a doctor so I study pretty hard at Science and Biology, (scored); (b) I want to become a teacher and I am struggling pretty hard with my studies (scored); (c) I want to become a sports minister (not scored).

## 2. Locus of Resources

(a) Internal : scored if the individual is described as able and competent, and/or if the achievement of the goal is felt to be dependent on his own activities or capabilities.

Score : If present +2, if absent 0.

Example : (i) Though I have not been able to achieve first rank as yet, I am sure, I will do so, in my next examination, (scored). (ii) I want to study at IIT Kanpur and if I work hard and get a distinction in S.S.C.E., I will get in there, (scored). (iii) I want to become a doctor but I don't know whether I will be able to, (not scored).

(b) External : Scored if the outcome of an action depends on others even if personal strengths are also enumerated.

Score : If present 0, if absent, +1.

Example : (i) I can't do well at studies because my brother disturbs me all the time; (scored). (ii) I fail in algebra everytime because my father has not learnt new maths and cannot guide me, (scored). (iii) I try hard but I just don't make it (not scored).

## 3. Awareness of Block-Personal

This category is scored if the person explicitly states that he does not possess the capabilities required to tackle the situation at hand.

Score : It present, +2, if absent, 0.

Examples : (i) I can't wear nice clothes because we are not rich, (scored), (ii) I hate drawing class and always fail, I just can't draw, (scored).

#### 4. Global Stage :

This category is scored if the person talks of himself in vague, undefined, unfocussed stages or thinks of himself as one of a metaphysical or universal system.

Score : If present, 0; If absent +1.

Examples: (i) I am a tiny spot in the universe (scored)  
(ii) I am a mere drop in this ocean of humanity. (scored).

#### 5. Initiative :

This category is scored if the task or problem is defined in personal term, and/or if the goal oriented activity is initiated by the person himself.

Score : If present +2; if absent, 0.

Examples : (i) I am not very good at Science subjects so I go to the community Science Centre to improve (scored).  
(ii) I have been getting bad marks at school because no one allows me to study at home. So now I have decided to study in the library after School hours. (scored).

Note : There are no particular words that automatically get scored for this category, the flavour of the Statement has to be felt. The statement that is being scored for initiative cannot be the same for which GOA has been scored, unless

followed by another 'initiating' phrase.

#### 6. Parental Dependence :

This category is scored if the subjects values are defined by parents, family or other authority figures, if his work and task are consigned to him or determined for him, if the person's statement and beliefs are supported by an elaboration of family backing.

Note : Long detailed accounts of family in the WAIs are scorable under PD, as are statements in the 'one should' tone.

Score : If present, D, if absent, +1.

Examples : (i) I am 13 years old and come from a family of five. I have 2 younger sisters - my father is an Engineer. He has studied ..... (scored). (ii) I want to become successful so that I can look after my family and make them happy (scored). (iii) My main duty in life, is to serve my parents (scored).

#### 7. Societal Commitment :

This category is scored if the subjects main aim or ultimate goal in life is to serve the country, bring social reforms and so on, but when these goals seem self defined, i.e., there is no specific mention of these being goals and values that have been instilled in him through his family.

Score : If present, +2; if absent, 0.

Examples : (i) My main aim in life is to bring light to

the suffering millions. (scored). (ii) I wish to spread knowledge through the nation so that my brothers can do better in their lives (scored). (iii) It is my duty to make my family happy and be a good son of India. (Not scored).

Note : It is assumed that if duty towards family and nation are combined in one statement, the values are parentally rather than personally defined.

#### 8. Problem Avoidance :

This category is scored if the person gives in or thinks of himself as wanting to give in, gets depressed and remains so without doing anything about it, or if he describes himself in 'Conflict avoidance', terms such as gentle, co-operative, helpful, good natured, etc. are used.

Score : If present, 0; if absent, +1.

Examples : (i) This career will not cause anyone to hate me or have any grudge against me. This is to my liking. (scored). (ii) I am friendly with everybody and never criticize people (scored). (iii) My problem is that I have no real good friends. So it gets very depressing and lonely (scored).

Sl. No.	Categories	Scoring	
		If Present	If Absent
1.	Goal Oriented Activity (GOA)	+2	0
2.	Internal Resources (IR)	+2	0
3.	External Resources (ER)	0	+1
4.	Awareness of Block Personal (ABP)	+2	0
5.	Global Stage (GS)	0	+1
6.	Initiative (I)	+2	0
7.	Parental Dependence (PD)	0	+1
8.	Societal Commitment (SC)	+2	0
9.	Problem Avoidance (PA)	0	+1

Maximum Possible Score : 14

Minimum Possible Score : 0

Eight month after the administration of initial "Who Am I" 25 girls in the 11 years age group were administered the WAI again to check the test-retest reliability of the new measure. The test-retest reliability was .82.

#### 4.6.5 Work Values Inventory (WVI)

Work Values Inventory was developed by Donald E. Super in 1951 to meet the needs for a means of assessing the goals which motivate man to work. It is designed to measure the values which are extrinsic to all as well as those which are intrinsic to all as well as those which are intrinsic in work, the satisfaction which men and women seek in work

and the satisfactions which may be the concomitants or outcomes of work. It seeks to measure these in boys and girls, in men and women at all age levels beginning, with adolescence and all educational levels. It is both in the variety of values tapped and in the ages for which it is appropriate, a wide range values inventory.

Values (according to Webster's unabridged) are defined as qualities which are regarded as intrinsically desirable and (according to English and English, 1958) as desirable ends or means to ends. They are the qualities which people desire and which they seek in the activities in which they engage, in the situations in which they live and in the objects which they make or acquire.

The WVI consists of 45 items which describes various types of work towards which most people have attraction in general but the attraction will be stronger to some than to others. Each statement is rated on a scale from 5 to 1 according to the importance one gives to the type of work stated there. The rating scale is as follows :

5. Means 'Very Important'
4. Important
3. Moderately Important.
2. Of Little Importance, and
1. Means Unimportant.

The Inventory has 15 subscales in it. Each item has a possible value of 5, 4, 3, 2, or 1 and the total of the

values assigned to the three items for each of the fifteen scales yields the raw score for each scale. Therefore each scale may have a raw score as high as 15 or as low as 3. If an item is skipped, it can be assigned '3' scores.

There is no time limit for completing the questionnaire but generally the subjects complete it in 10 to 15 minutes.

The W.V.I. was standardised by administering it in the spring of 1968 to a national sample of 10,083 students in grades 7-12. Boys and girls were about equally represented in the total sample. The sampling procedure developed by Dr. John T. Dailly for the Project Talent Survey was utilized to draw the sample for the WVI standardization. To keep the WVI sample to manageable size, a total sample of approximately 3,000 pupils per grade was planned.

Reliability :

The WVI has been tried out in a variety of forms in research since 1951. First a series of items selected from the published research on values and job satisfaction used as interview stimuli (Super et al, 1957) later an open-ended essay form designed to derive items in the language of junior high school, boys, then a paired companion inventory used with the same subjects and other high school pupils (Hana , 1954), it is now a 45 item inventory responded to by rating each item on a five point scale.

For example :

---

Work in which you can get a raise 5, 4, 3, 2, 1.

---

The subject has to choose and encircle one number according to his preference of their kind of work stated.

Cronbach (1960) reported that the forced choice method differentiates better than the rating format and Normile (1967) has shown, with a combination forced-choice and rating form of WVI that occupational groups (psychiatrists, psychologists, teachers, priests, lawyers, accountants and engineers) are indeed somewhat better differentiated from each other by the forced-choice format.

But due to some serious defects as Cronbach (1960) reported, it is not as reliable as rating form. Reliability was therefore chosen, at the expense of some differentiating power. The final correlation data was taken from content of the fifteen present scales with fifteen values. It was assessed on 51 boys and 48 girls in the tenth grade. The smallest correlation was .43 and a median correlation of .65 was observed. Correlations greater than .70 occurred in one-third of the cases.

Test-retest reliabilities, means and standard deviations are reported in a study of the 1968-69 form of the WVI. It was administered two weeks apart to a sample of 99 high school students in a suburb of Albany, New York.

The differences found between mean scores for males and females were not significant when tested statistically, although the apparent differences are consistent with related findings : girls appear to exhibit higher scores for Altruism and lower scores of Economic Returns than do boys.

The Fifteen scales of the 45 items inventory, in which each scale consists of three items, are internally consistent and stable over a time interval of two weeks. The lowest retest reliability is .74, the highest .88, and the median is .83. Validity - The Inventory was validated on different aspects by the American Psychological Association's Committee on Test Standards which started its work since 1954. They can be viewed as aspects of construct validity.

#### Construct Validity :

Several studies like research on job satisfaction and morale, work by Hoppock (1935), Centers (1948), and others concluding that there are many values associated with work which are not in Spranger's list. Theorizing by Darley and Hagenah (1955), Fryer (1931), Ginzberg (1951) and the author (Super 1957), much of it based on relevant research findings, provide further evidence of the validity of theory underlying the WVI, which states that some values are intrinsic to the work activity itself, that others are associated with it in various ways, and that still others are the results of work even though not necessarily

related to any particular type of work.

Construct validity is often shown by the correlations of the test in question with appropriate scales of other tests designed to assess the same traits. The Work Value Inventory as a measure of Values, has been studied in relation to the Allport - Vernon Lindzey study of values as a direct measure of values, and to the strong Vocational Interest Blank and the Kuder Preference Record (Vocational) as indirect measures of Values, since interests are the activities or objects by means of which values are achieved and have been shown to be empirically as well as theoretically related. Despite certain unwarranted assumptions involved in the correlational analysis of paired comparison or other ipsative scores the analyses throw some additional light on what the WVI measures. It should be borne in mind that all correlations reported, whether positive or negative, are necessarily somewhat lowered because of the ipsative nature of either or both of the instruments employed.

Altruism scale correlates significantly, positively and substantially with the social service scale of the Kuder (.67) and with the social scale of the AVL (.29) and to a much lesser extent with some other expected scales but not with the YMCA key of the strong, which itself has a negligible correlation with the AVL social scale.

The Esthetic Scale correlates in the expected way with

the Artist Key (.55) of the SVIB, the Artistic scale of the Kuder (.48), but not with the Aesthetic scale of the AVL(.08), it does have the appropriate negative correlations with other scales.

The Creativity scale correlates moderately well with the Artistic (.24) and Scientific (Engineer 25, Physical 21) Scales of the SVIB, in the case of the Kuder only with the Artistic (.37) and the Literary (.35) but only .17 with the AVL Theoretical scale. There are some useful and meaningful negative correlations.

The Intellectual Stimulation scale correlates negatively with the interests of Farmers on the SVIB, but positively with Kuder Outdoor (.29), computational (.21) and Scientific (.34), interests, negatively with Persuasive and Clerical; it correlates positively but only .23 with AVL theoretical values, suggesting that wanting stimulating work is different from the desire to understand.

The Achievement scale shows no useful correlations with other value and interest scales.

The Independence Scale shows no relationships with the scales of other Value and interest inventories; this does not seem surprising.

The Prestige scale correlates positively with Social Contact occupational interests (Y Sec'y .27, Life Insurance

Scales .29) and negatively with Artistic (-.24) and Scientific (-.25) Occupational Interests on the SVIB, and with no Kuder interest Scales. It has very low but statistically significant correlations with the AVL Political (.14 positive) and Aesthetic (.17 negative) scales. This very low correlation between the WVI Prestige and the AVL Political scales suggests that the former does indeed measure valuing the respect of others rather than the desire for power over others.

The Management or planning and Supervising Scale is positively and substantially correlated with Social and Contact occupational interests (Y Sec'y, .57, Life Ins. Scales .53, Purch, Agt. .43) and negatively with Artistic (-.60), Scientific (Engineering - .33, Phys. -.37), and Technical (Farmer - .42) occupational interests in men on the SVIB, positively correlated with business interests of all types and negatively with Artistic (-.35), Musical (-.25) and Social Service (-.27) interests on Kuder; and positively with Political Values, negatively with Aesthetic on the AVL (the correlation with social values is zero).

The Economic Returns or material values scale tends to show the expected predominantly negative correlations with the scales of the three other instruments, but not positively correlated with Life Insurance interests or with Computational preferences and has correlations of .24 (Significant

at better than the .01 level) with the AVL Economic and political scales.

The Security Scale is correlated positively with Farmers' (.36) and negatively with Lawyers' (-.28) interests on the SVIB negatively with Artistic scores (-.24) on the Kuder and AVL Aesthetics, but is just barely related to business Detail (Purchasing Agent) interests on the SVIB not at all to computational or Clerical on the Kuder and just slightly related to AVL Economic and Political values as might have been predicted.

The Surroundings or physical conditions of work scale is positively related to Technical interests (Engineer .27, Farmer, .49), negatively to Social Service (Y Sec'y- .32) and business contact (Life Ins. Sales - .43) and Literary (-.40 layers) interests on the SVIB, in adults and is positively but only slightly related to clerical preferences on the Kuder and unrelated to AVL Scores.

The Supervisory Relations scale shows slight - negative relationships with Business Contact and Legal interests on the SVIB, but none of the expected positive relations with Business Detail interests; it is also somewhat negatively correlated with Artistic and Library preferences on the Kuder but unrelated to the AVL.

The Associates values show no hypothesized relationships with any of the interests measures, although they

were expected in the Clerical and Social contact interest fields, and they are minimally related to AVL social values.

The Way of Life scale also shows only a few, apparently unsympathetic, relationships. Perhaps these items mean too many different things to people in different contexts to have any systematic behavioural relationships.

The Variety Scale, which has developed particularly with lower level occupations such as assembly and counter sales jobs in mind, is unrelated to any of the other interest or values inventory scales except, surprisingly, to Kuder Scientific preferences (.24) - perhaps because variety has different meanings for various types of people. Correlations of a low order had been hypothesized with the Kuder Outdoor and Persuasive scales. More evidence is needed on this scale, as on the Way of Life, Associates, Achievement and Intellectual Stimulation scales; their behavioural interpretation clearly depends on other personal data.

Ivey (1963), commenting on the WVI-Kuder data, notes that it is the five values (Creative, Esthetic, Management, Intellectual Stimulation, and Altruism) which deal most with job related activities that are related to Kuder scores, while the remainder have more to do with rewards and concomitants.

#### 4.6.6 Thematic Apperception Test (TAT)

The Thematic Apperception Test or TAT as it will be

referred here is a Projective Test. Psychologically, projection is an unconscious process whereby an individual -

- (1) attributes certain thoughts, attitudes, emotions or characteristics to other persons or certain characteristics to objects in his/her environment;
- (2) attributes his/her own needs to others in his/her environment;
- (3) draws incorrect inferences from an experience.

A projective test, then is one that provides the subject with a stimulus situation, giving him/her an opportunity to impose upon it his own private needs and his/her particular perceptions and interpretation. Several forms of the projective methods (pictures, inkblots, incomplete sentences, word associations, one's own writing and drawings and others) are intended to elicit responses which will reveal the individual's "personality structure," feelings, values, motives, characteristic, modes of adjustments or "complexes". The subject is said to project the inner aspects of his/her personality, through his/her interpretations and creations, thereby involuntarily revealing traits that are below the surface and incapable of exposure by means of the questionnaire type of personality test. (Freeman, 1950).

Projection is not recognised as being of personal origin, with the result that the content of the process is experienced as an outer perception and of external origin.

This is because both the process of projection has been thought to be unconscious as well as the individual has been thought to be unconscious of his/her possession of the traits which he projects. Murray (1951) said "whatever peculiar virtue the TAT may have if any, it will be found to reside ... in its capacity to reveal things that the patient is unwilling to tell or is unable to tell because he is unconscious of them". (p.577).

Projective Tests are expected to elicit responses involving not only cognitive factors (that is, those that relate to what is present to the senses and to which meaning is given) but also affective factors (that is feelings about what is there).

The most widely used projective techniques (for example, the Rorschach, inkblots, the Murray pictures) are among other things tests of perception and meaning, both of which are dependent upon individual mental processes. The less clearcut the situation the greater will be individual differences in perception; for each subject sees what he himself is disposed to see and does what he is personally disposed to do. In so doing and through the manner of confronting and responding to the stimulus situation, the individual reveals some aspects of his personality.

#### 4.6.6 (a) The TAT Tool.

The TAT was conceived by H.A. Murray (Morgan & Murray,

1935). It consists of twenty pictures. In the beginning the early available edition of the TAT was used at the Menninger Clinic. They are a photographed set of small pictures, nine of which are identical (except for size) with pictures retained for the published set (Murray, 1943) while an additional eight are substantially the same though they are redrawn for the 1943 edition.

The standard TAT as presented to the subject, consists of twenty cards, eleven of which are used irrespective of the sex and age of the subject. For the nine remaining presentations, alternatives exist, chosen sometimes according to sex, sometimes according to age: in two cases - cards 12 and 13 there are three alternatives. Cards for a specific type of subject are distinguished by letters following the serial number : M for adult males, F for adult females, B for boys under 14 and G for girls under 14.

Based on the median value of the TAT cards, only four were used which were having more need achievement motive oriented. They are the following in order of their use :

- A : Father - son picture (No A from Murray set)
- B : Two friends in communion
- C : The boy in a checked shirt at a desk with an open book before him (picture H of the original TAT)
- D : A man in the office in deep thought.

Inspite of the difficulties in administering and

scoring, the TAT was selected due to its projective nature. In selecting the TAT, the investigator was sharing the assumption of others who have used it extensively (Murray, 1938; 1943; Henry, 1956; McClelland, 1958a; Johnson, 1974; Phutela, 1976; Umayaparvathi, 1982) that the test enables one to identify basic and enduring aspects of the subjects personality as revealed in projective fantasy response to the cards. Henry (1956) described the TAT stories as portraying the subject's response of reality events. It is hoped by the investigator that the projective test would truly identify the subjects (teachers) who are glowing on in their profession and would rectify any skewness in the results of data collected through the four other questionnaire tests.

Murray's TAT as a medium for expression is based on the Freudian hypothesis that a good place to look for the efforts of motivation is in fantasy (McClelland et al, 1953). Subsequent research indeed provided suggestive evidence that superficial verbal reports of achievement needs are not prediction of achievement oriented behaviour whereas fantasy production is a valid index of the same (McClelland et al, 1953; De Charms et al, 1955; McClelland, 1956a, 1958a) Further, its stability over time has also been ascertained (McClelland, 1956a; Singh, 1978).

#### 4.6.6 (b) Administration of the TAT

The projective tests are more or less unstructured; instructions are general and are kept at a minimum to permit variety and flexibility of responses; the responses which are neither right nor wrong, are the subject's own spontaneous interpretations. (Appendix I, story writing Test).

The TAT requires the subject to make up a story around a picture visually presented to him/her. In so doing it clearly delineated the task to the subject, states the beginning and the end of the task unequivocally and binds the subject to one level of behaviour - by written record. TAT gives a springboard to the subject as to the topic about which he is expected to produce and thereby makes interpersonal comparison easier. The presence of a picture supports the subject especially if he/she is inhibited and inert - in his efforts at production. (Rapaport, 1968, p.466).

The whole test (4 cards) is completed in twenty minutes.

#### 4.6.6 (c) Scoring Procedure for the TAT stories.

In the present investigation, the obtained TAT stories were analysed for need achievement by following the original scoring procedure described by McClelland (1953) - Each picture could get a maximum score of +11 for need achievement. Thus the maximum possible score for four pictures was 44, and the minimum was 1.

Each TAT story was first classified as belonging to one of the three imagery categories : Achievement Imagery (AI), Doubtful Achievement Imagery or Task Related Imagery (TI) and Unrelated Imagery (UI). The stories scored as AI were further scored for components of need achievement, namely Need (N), Instrumental Activities (I), Goal Anticipation (Ga + and Ga-), affective states in goal attainment (G+ and G-), blocks (Bp, Bw), Nurturant Press (Nup), and Achievement Thema (Ach Th). UI (Unrelated Story) was scored 1, TI (doubtful imagery ) was scored 0, and AI (Ach imagery) was scored +1. The need achievement scores for any one individual was the total of the scores obtained on all four stories written by him/her. The total scoring of the sub-categories of AI are as follows :

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	<u>Marks</u>
(A) Subcategories	
1. Achievement Imagery (AI)	+1
2. Need achievement (N)	+1
3. Instrumental Activity & Outcomes (I+I I-)	+1
4. Anticipatory Goal states (Ga+, Ga-)	+1 +1
5. Obstacles (Bp, Bw)	+1, +1
6. Nurturant Press (Nup)	+1
7. Affective states (G+, G-)	+1 +1
8. Achievement Thema (Ach Th)	+1
Total scores	<u>+11</u>
(B) Unrelated imagery (UI)	-1
(C) Doubtful imagery (TI)	0

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#### 4.7 CHECKLISTS A,B :

The researcher has used the help of two checklists to assess the schools where the various prevailing situations or circumstances would be highlighted to help keep the teachers 'Glowing-on' or fail to keep the others so and thus causing burnoutness.

The checklists were meant for various categories of people in the school. (Appendix).

- i) Checklist A - for the Principal/Manager of the School.
- ii) Checklist B - for teachers of the school.

4.7.1 (i) Checklist A included information needed in connection with the history of the school - dates and various circumstances leading to the opening of the School, persons both official, Church authorities and the public responsible and co-operating in the establishment.

The names of the principals who have worked and contributed to the development of the school finds an important place. According to Carveth (1983) the specified leader behaviour variables has powerful effects upon the teacher burnout or vice-versa in keeping them 'glowing-on'. This would certainly be for the contemporary Principals of the subjects participating in the study.

The planning and execution of the curricular and

co-curricular activities in the school is another important point which could have its bearing upon the work of the teachers either in keeping them glowing on or being burnout. This item along with workload distribution, methods of teaching, in the class, rapport of the school, or relationships with Principal, teachers guardians and students etc., and suggestions for improvement were common for the two checklists.

(ii) Checklist B was meant for teachers. It was helpful to know their views on the standard of the school, their option for teaching in a particular school and the circumstances. Their own contribution in planning co-curricular activities as well as their co-operation in carrying out those responsibilities, their methods of teaching and also their suggestions for improvement in administration, teaching, evaluating, and relationships etc., were valuable aid in the case studies.

#### 4.8 DATA COLLECTION

Data collection of the present investigation was conducted in two phases :

Phase I : A pilot study was conducted on 24 teachers of St. Francis School, Akota in Baroda, to check the comprehensibility of the research tools, suitability of the items and the nature of the sample. The Human services survey (MBI) and the sentence completion Test by V.S. Shanthamani and A.Hafeez

was administered to these teachers.

As a result of the pilot study, the wordings of few items of the MBI were changed and clarified. For example, the word 'recipient' in the test was changed to 'student'. Item No.2 - 'I feel used up at the end of the work day' was changed to 'I feel like not doing anything, as I feel dead tired at the end of the work day', as many teachers were not acquainted with the idiomatic English expression 'used up'. Similarly item 8 'I feel burned out from my work' was changed to 'I feel worn out from my work'. The phrase 'at the end of my rope' (Item 20) was altered to 'I feel like I'm almost finished at the end of the day'.

The sentence completion Test, which was found too easy for teacher sample was therefore replaced by the TAT for achievement Motivation.

Phase II : It was essential that the questionnaire were also translated in Hindi before printing them. The data collection was began from 1986 and was continued throughout 1987 as time suited the investigator after resuming her work in the college. Due to lack of sufficient time data collection was spread not only upto 1987 but even later in a few cases.

The procedure followed by the investigator is as follows :

The investigator first contacted the Heads of the

Institutions through a letter stating her purpose and requesting them for suitable time to visit the school and meet the teachers. On receiving the response the investigator made it a point to establish a good rapport with the teachers. Then she explained the nature of the questionnaire item by item. As the teachers needed time to fill the four questionnaire at the free periods from class especially the Self-Perception Inquiry, which was a little more time consuming, they were allowed to have questionnaire with them. According to the desired date, the investigator returned to the group of teachers to complete the story writing test. The teachers were shown the four TAT pictures one by one and the time factor was maintained in writing the four stories. Thereafter the questionnaire were collected.

In several schools, teachers were unable to complete the questionnaire even after the second visit of the investigator i.e., after the story writing test. So the investigator had to wait for another day where it was not convenient for her to return from the college. Thus, each school she visited, a minimum of three days were needed to complete the questionnaire. In some cases the investigator was forced to leave the questionnaire after the last test was administered. She was promised that the questionnaire would be sent to her. In these cases she was surely disappointed as only a couple out of ten or fifteen questionnaire were returned to her. This can be seen from the number

teachers in the schools enlisted. From two Government schools not a single questionnaire reached the investigator. The investigator earnestly requested the teachers not to leave any item out as it would cause the whole questionnaire to be useless.

Despite the hard efforts to make a good rapport and after giving so much time and patience, the investigator was disappointed by the lack of cooperation by some teachers in a few schools. At the instigation of a couple of teachers, one whole school simply refused to cooperate with her request. The Principal failed to exert her influence upon them. However, in most schools the Principals' influence upon the staff facilitated the work of data collection for the researcher.

The investigator had also to request the Principal or the secretary of the school to fill up checklist A giving details of the founding and other informations. The teachers were given an additional checklist B to check the activities - curricular and co-curricular and their own participation in the same.

The purpose of all the checklists was to tally with

what the school is considered by the Principal, Manager and Teachers.



As the purpose of the study was to make a comparison on psychological correlates between Tribal and Non-Tribal Teachers, the investigator was particular about the completion of the number of both types of teachers - and even for male and female Tribal and Non-Tribal teachers. For this reason the various other management schools besides Ursuline were taken such as Government schools, Company schools, Protestant Church managed schools and non-recognised schools etc.

The investigator felt at the end of her data collection that the teacher sample is a difficult subject for educational research. They were unwilling to give their own time to fill in the questionnaire. There was much hesitation in supplying the desired information. The investigator felt that teachers were not convinced enough of the confidentiality she promised. Perhaps this was due to her being of the same management in most cases. In one school they were very particular in giving the questionnaire back right into the hands of the investigator.

The investigator discovered that the prevailing mood of the teachers was generally one of despondency, indifference and pessimism. "What's the use of all these"? 'We have filled several such questionnaire etc., were some of the statements made. This can mean that perhaps they were lacking in

enthusiasm. However in some schools, teachers showed willingness not only to comply with the wishes of the investigator but also eagerness to know the outcome of this research.

#### 4.9 ANALYSIS OF DATA

For analysing the data, frequency, percentage and non-parametric statistic like Chi-Square tests were applied. However ANOVA were used for finding correlations. The data was scored with the help of a hand calculator and Biserial correlation<sup>1</sup> by computer.

The instruments used in the present investigation were Likert-type attitude scales and self-description (SPI) and Projective Test.

Kerlinger (1973, p.425) points out that these Likert-type attitude scales 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 individual and they do not possess the desirable characteristics of equal intervals.

The only information provided 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 even 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).

Further, initial analysis of MBI scores showed a trend towards non-normal distribution. Skewed scores were 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=220 was not quite small but scores showed trends towards non-normal distribution and 1, 2, 3, 4, 5, 6 attitude scales were used. Therefore non-parametric techniques were used.

Considering the various points discussed so far, the

investigator decided to apply non-parametric measures like Chi-square and percentages found appropriate techniques to find out the relationship between variables like sex, age, marital status, teaching experience etc., which were in the form of categories and psychological variables like MBI and PIL etc., in which levels (Low, Moderate and High) or category-wise distributions were in terms of frequencies and not in terms of scores.

Further, despite all that has been said above regarding the use of non-parametric tests and the use made of by the investigator, parametric test has also been utilized where scores were expressed in analysis. Asher (1976) comments on this in the following words "In practice, some so-called non-parametric statistics use rank ordered data that are treated as equal interval data. This latter assumption may be worse than the assumption that variables are normally distributed when developed through careful scaling and test construction procedures" (Asher, 1976, p.296). He considers the parametric analysis "an excellent one" "in the abstract to consider each time a statistical analysis is done". It is to be noted "that data can be transformed readily from interval data to nominal variables, but that nominal variables **can only be transformed into interval variables with considerable** prior work, if at all." (Asher, 1976, p.296). Hence the researcher feels justified when parametric analysis has been resorted to. The PIL, Work Value Inventory and Self-

-Perception Inquiry have been given [unclear] -  
ANOVA Test (one way). Biserial Product Moment Correlation  
was computed for studying the frequency and intensity of  
teacher burnout or glow-on.

#### 4.10 CONCLUSION

In the foregoing chapter the suitability of the methodology was dealt with, the objectives of the study were stated, Hypotheses for studying the objectives were drawn, definitions of the terms used were given, selection of the sample and the schools, the instruments (tools) and Checklists A and B selected, data collection procedure was detailed and analysis of data etc., were discussed at length.

In the chapter that follows, the analysis and interpretation of the data will be presented in detail as per objectives and hypotheses.