CHAPTER III

METHODS AND PROCEDURE
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3.1 DESIGN OF THE STUDY:

The present study entitled; "Burnout, Locus of Control and Mental Health of Teachers in Eastern Province of Kenya" can be described as an exploratory descriptive survey. It is exploratory in the sense that it sets out to find the relationship between; Burnout, Locus of Control and Mental Health of teachers which is an unexplored area. "A descriptive study is concerned with functional relationships that exist, opinions that are held, processes that are going on, effects that are evident or trends that are developing" (Best 1983). The survey method gathers data from a relatively large number of cases at a particular time. It is concerned with the generalized statistics that result when data is abstracted from a number of individual cases. The survey method of research involves a clearly defined problem and definite objectives.

3.2 SAMPLE:

Stage 1: For the development of Teachers Mental Health Scale different sets of samples were drawn for different purposes at different occasions right from the selection of items to the finalization of the scale.
3.2.1 Preliminary selection of items

Preliminary selection of the items was done with the help of a few judges selected from different fields. Table 3:1 shows the details of the Judges consulted for this purpose.

**Table 3:1**

Statement of judges selected for preliminary selection of items.

<table>
<thead>
<tr>
<th>S.NO</th>
<th>FIELD</th>
<th>NO. OF JUDGES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Department of Education Panjab University Chandigarh</td>
<td>3</td>
</tr>
<tr>
<td>2.</td>
<td>Department of Psychology Panjab University Chandigarh</td>
<td>1</td>
</tr>
<tr>
<td>3.</td>
<td>Department of Business Management Panjab University Chandigarh</td>
<td>1</td>
</tr>
<tr>
<td>4.</td>
<td>Department of Psychiatry, Postgraduate Institute of Medical Education and Research Chandigarh.</td>
<td>3</td>
</tr>
</tbody>
</table>

**TOTAL**  **8**

3.2.2 Sample drawn for Item Analysis:

After preliminary selection of items the Teachers Mental Health Scale was developed. Tutors in two teachers training colleges in Eastern Province of Kenya were selected. The detailed picture of this sample is given in Table 3:2.
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TABLE 3:2
Sample drawn for Item Analysis:

<table>
<thead>
<tr>
<th>District</th>
<th>Serial No.</th>
<th>Name of the Teacher Training College</th>
<th>No. of Teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMBU</td>
<td>1.</td>
<td>KIGARI TEACHERS TRAINING COLLEGE</td>
<td>72</td>
</tr>
<tr>
<td>MERU</td>
<td>2.</td>
<td>MERU TEACHERS TRAINING COLLEGE</td>
<td>43</td>
</tr>
<tr>
<td></td>
<td>2.</td>
<td>TOTAL</td>
<td>115</td>
</tr>
</tbody>
</table>

Stage II  At the second stage of study a purposive technique of sampling was employed. Equal samples were drawn from urban and rural areas. Out of the six districts comprising the Eastern Province of Kenya, four districts were selected, namely, Embu, Meru, Machakos and Kitui. 50 teachers from urban government and private high schools and 50 teachers from rural government and private high schools were selected. Selection of urban high schools was determined on the condition that they fell within municipalities.

Thus, to begin with the present study was conducted on a sample of 400 Urban /Rural high school teachers. But due to the incomplete responses of some teachers in one test or other, 15 teachers were deleted and the final sample of the present investigation comprised of 385 high school teachers i.e. 190 urban and 195 rural. (The composition of the final
3.3 TOOLS EMPLOYED:

In the present investigation the data was collected with the help of the following tools.

1. Maslach Burnout, Inventory (MBI) (Maslach & Jackson 1981)
2. Locus of Control Scale (Rotter 1966)
3. Teachers Mental Health Scale (Constructed and Standardised by the investigator).

3.3.1 Maslach Burnout Inventory (Maslach & Jackson 1981)

The Maslach Burnout Inventory (MBI) is based on the concept of Burnout as a syndrome, a progressive response that occurs over time as a direct result of a helping or client relationship. Maslach (1982) defined Burnout as "a syndrome of Emotional Exhaustion, Depersonalisation reduced Personal Accomplishment, that can occur among individuals who do "People work" of some kind. It is a response to a chronic emotional strain of dealing extensively with other human-beings, particularly when they are troubled or are having problems".

The original Maslach Burnout Inventory (1979) was designed to assess perceived Burnout among persons in helping professions in general. The scale was developed over a period of approximately eight years.

The Maslach Burnout Inventory (MBI) Form Ed is basically
the same as the original MBI. It varies in that some items have been modified in the MBI Form Ed. The word recipient used in the original MBI has been changed to student in the MBI Form Ed. In the teaching profession students are the teachers recipients. A separate Educators Demographic Data Sheet has been developed to be used along with the MBI Form Ed. Otherwise all scale administration and scoring procedure is the same as for the original MBI. Cautions and recommendations regarding the use and interpretation of the MBI also apply to Form Ed.

The Maslach Burnout Inventory provide measure of perceived Burnout which is characterised by feelings of physical, emotional and mental exhaustion (Pines, Aronson & Kafry, 1981). It is also characterised by a state in which the helping professional no longer has any sympathy, respect or positive feelings for clients; instead the helping professional develops a cynical and dehumanized perception of service recipients in which they are labeled in impersonal or derogatory ways. Another aspect of the syndrome is a diminished sense of personal accomplishment and competence on the job (Maslach, 1981). The Burnout syndrome is thought to occur only among human service professionals (Edelwich & Brodsky, 1980; Paine, 1981; Pines, 1982; Maslach, 1982a; 1982b).

The MBI measures the basic constructs/factors of
Emotional Exhaustion, Depersonalisation and Personal Accomplishment.

The Maslach Burnout Inventory (MBI) comprises of 22 items. The Emotional Exhaustion subscale consists of nine items which describe feelings of being emotionally extended by one's work.

The five items on the Depersonalization subscale describe an unfeeling and impersonal response towards students in one's care and service.

The subscale of Personal Accomplishment contains eight items that describe feelings of competence and successful achievements in one's work with people.

3.3.1.1 Inventory Administration

The instrument has a self-report questionnaire format that requires participant's to respond to items on a Likert-type frequency scale. The MBI can be completed in fifteen minutes. It can be administered on individual basis or in a group format. Respondents are asked to rate each statement on two dimensions, frequency and intensity. As reported in the first edition of the manual (Maslach and Jackson 1981), the original MBI had two response dimensions: Frequency and Intensity. Correlations between the frequency and intensity dimensions across individual items ranged from 0.35 to 0.73 with the mean of 0.56. These results suggest
that while there is a moderate relationship between how often one experience various feelings and how intensily they are felt, this relationship was far from perfect. Thus the MBI yields six sub-scales. However the respondents in the present study rated items on the frequency dimension only because previous research has indicated that the intensity and frequency ratings are highly correlated (Constable and Russel 1986; Iwanicki and Schwab 1981; Maslach and Jackson 1981). Also several authors have commented that the six sub-scales make the unaltered MBI a confusing and cumbersome instrument (Burke, Shearer, & Deszca, 1984; Cahoon & Rowney, 1986; Gaines & Jermier, 1983; Golembiewski & Munzenrider, 1981; Meier, 1984).

3.3.1.2 Scoring Procedure

The three subscales of the MBI; Emotional Exhaustion, Depersonalisation and Personal Accomplishment are kept separate at present and are not combined into overall score. These three scores are computed for each respondent.

A high degree of Burnout is reflected in high scores on the Emotional Exhaustion and Depersonalization subscales and Low scores on the Personal accomplishment subscales.

An average degree of Burnout is reflected in average scores on all the three subscales.

A low degree of Burnout is reflected in low scores on the Emotional Exhaustion and Depersonalization subscales and
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in High scores on the Personal Accomplishment subscales. Burnout is conceptualized as a continuous variable, ranging from low to moderate to high degree of experienced feeling. It is not viewed as a dichotomous variable which is either present or absent.

The MBI scores of a group of respondents may be treated as aggregate data. Means and standard deviations for each subscale are computed for the entire group and can be compared to the normative data provided in the test manual.

3.3.1.3 Reliability

Internal consistency was estimated by Cronbach's coefficient alpha (N = 1316). The reliability coefficients for the subscales were the following:

.90 for emotional exhaustion
.79 for depersonalization and
.71 for personal accomplishment.

Test-retest reliability of the MBI for a sample of graduate students in social welfare and administrators in a health agency (N = 53) was conducted in two sessions separated by an interval of two to four weeks. The test-retest reliability coefficients for the subscales were the following:

.82 for emotional exhaustion
.60 for depersonalization and
.80 for personal accomplishment.

These co-efficients though ranging from Low to Moderate were
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all significant beyond the .01 level.

The Maslach Burnout Inventory (MBI) subscale reliabilities were found to be similar for teachers as were found in the original research sample of helping professionals. In a sample of 248 teachers, the two test sessions were separated by an interval of one year. The test-retest reliabilities for the three subscales were .60 for emotional exhaustion; .54 for Depersonalization; .57 for Personal Accomplishment.

3.3.1.4 Validity

Validity, has been addressed in two constructs, convergent and discriminant. Three methods were used to establish convergent validity.

1. Measures of experienced Burnout and personal reactions (Maslach 1976; Maslach and Jackson 1979; Jackson and Maslach 1982);

2. Dimensions of the job experienced (Maslach, 1978);

3. External validation of personal experience by those close to the respondent, such as peer and family ratings (e.g. spouse evaluations of policemen) (Maslach & Jackson, 1979; Jackson and Maslach, 1982). Tests of discriminant validity distinguished the MBI from measures of other psychological constructs, specifically job dissatisfaction, which accounted for only 6% of the variance. A test of rater tendency to distort responses
due to social desirability showed no significant correlation.

Iwanicki and Schwab (1981) examined the reliability and validity of the MBI using teachers as a sample of "helping professionals" (N=469). In their measures of constructive validity results indicated that the MBI measured the same constructs as the original Maslach and Jackson (1979) study. The subscale of Depersonalization, however broke down into a job-related and a student related factor. The authors found a mean correlation of .87 between the frequency and intensity, dimensions and question the need to cope the two-dimensional approach with teachers.

Attempts to estimate how widespread and how severe are teacher Stress and Burnout have been plagued with problems of measurement. Subjective Measures using self report of teachers emotional state and feeling about his job have been widely used. (Hiebert and Farber, 1984) physiological measures have also been widely used involving, for example, monitoring heart rate and analysis of urine. Behavioural measures based on one or more indices such as stuttering, facial expressions or resigning from teaching or absenteeism have also been used. However the Maslach Burnout Inventory (MBI) is the most widely used instrument in Burnout research (Einsiedel & Tully, 1981; Golembiewski & Munzenrider 1981; Kahill, 1988; Shinn, 1982). The MBI has
also adequate psychometric properties (Bodden, 1985, Dowd, 1985; Meier, 1984).

Thus for the measurement of Burnout among teachers selected for the study, the investigator found the Maslach Burnout Inventory (MBI) Form Ed appropriate.

(Maslach Burnout Inventory Form Ed has been appended with the thesis APPENDIX-B)

3.3.2 Locus of Control Scale (Rotter 1966)

The Locus of Control scale was originally conceived as a unidimensional measure of internal versus external control of reinforcement (Rotter 1966). In his introduction of the scale Rotter reports two factor analysis of the scale which yielded a strong general factor. One study of 400 college students was conducted by Rotter. This study yielded a general factor which accounted for much of the variance and several small factors. Rotter also reported a factor analysis done by Franklin (1963) in which there was a total variance. Both studies were cited as evidence for the undimensionality of the scale. A reanalysis of Franklin's data by Prociuk (1977) indicated that Franklin's general factor accounted for only 6.4% of the total variance, and few of the 23 items of the scale had loadings on .35 or greater on the factor, Prociuk concluded that Franklin's factor accounted for 53% of the common variance.
A number of factor analysis of the items on Rotter I-E scale have been conducted since 1966 and all have supported the notion of the multidimensionality of the scale based on finding two or more factors. Watson (1981) summarised 16 factor analytic studies of the I-E scale in which 18.8% to 44.5% of the variance was accounted for by two to five factors. In addition to reviewing other studies Watson (1981) also factor analysed the I-E scale, using three methods of factor extraction. She concluded that the two-factor solution was adequate and probably the best representation of the scale.

McInish and Srivastava (1982) made the most serious attempt to determine the actual number of factors in the I-E scale. They were concerned with total variance, using principal components analysis followed by varimax rotations. They found that both the scree test and the minimum eigenvalue 1.00 indicated a nine-factor solution.

In a more recent article, Barley & Wiesle (1987) studied the number of makeup of the factors of Rotter's I-E scale with a sample of college students and reported that there were 10 components with eigen value greater than 1.00 and the screen test also indicated that there were 10 factors. This finding support the statement of Rotter (1975) that factor analysis of the I-E scale with different subjects and situations "do not reveal the true structure of
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the construct; they only reveal the kinds of similarities perceived by a particular group of subjects". Like most other factor analysis of the I-E scale, these results support the notion that the scale is multidimensional.

The Locus of Control has been operationalized many times in terms of causal attributions, psychological and personality dimensions. Ganellen & Blaney (1985) stressed the need for assessment of the different dimensions of Locus of Control rather than treating it as a unidimensional construct. Various authors developed scales to measure Locus of Control. For example, Crandall Intellectual Achievement Responsibility Questionnaire (1965), Stephens-Delys Reinforcement contingency Interview (1973), Stanford Pre-school Internal-External scale (1974), Multidimensional and Multi-attributional causality scale (1979), Internal, Powerful others and Chance scale (1974), Multidimensional Health Locus of Control scale (1978), Depression Locus of Control scale (1987).

The Rotter I-E scale 1966 has been the most widely used measure of internality versus externality. Rotter (1975) says that to view the question as unidimensional versus multidimensional is inappropriate. He claims that a broad concept of internal versus external Locus of Control is appropriate for most samples and that there will likely be different subscales within the concept that will vary from
sample to sample.

The Rotter I-E Locus of Control scale which has a unidimensional and multidimensional component was adopted for the present investigation. This scale measures Internal-External dimension of personality, that is internal and external control of the person.

It is a 29 item scale with 6 filler items. Items are scored towards externality so that a higher score on the scale indicates a more external direction and a lower score on the scale indicates a more internal direction.

Each item has two statements, one representing the internal direction, and the other representing the external direction. The subject is required to check one of the two statements according to his own belief. There is no time limit.

3.3.2.1 Scoring of the Scale:

Scores range from 0-1 for each item. The filler items 1, 8, 14, 19, 24 and 27 are not scored. The possible range of scores in the scale is 0-23.

Responses on items at serial numbers:

2(a), 3(b), 4(b), 5(b), 6(b), 7(a), (9a), 10(b), 11(b), 12(b), 13(b), 15(b), 16(b), 17(a), 18(a), 20(a), 21(a), 22(b), 25(a), 26(b), 28(b), 29(a); are directed towards externality and carry a score of one point each where as responses on items at serial numbers:
2(b), 3(a), 4(a), 5(a), 6(a), 7(b), 9(b), 10(a), 11(a), 12(a), 13(a), 15(a), 16(a), 17(b), 18(b), 20(b), 21(b),
22(a), 23(b), 25(b), 26(a), 28(a), 29(b);
are directed towards internality and carry a score of zero each. Total score obtained by an individual on 23
significant items in this scale represents his Locus of Control orientation.

3.3.2.2 Reliability:
The split half reliability of the scale is between .65 and .79. (Rotter's Locus of Control has been appended with
the thesis APPENDIX-C)

3.3.3 Teachers Mental Health Scale (TMHS).
The test was developed and standardized by the investigator. Detailed description of the test has been
given in Chapter IV. (Teachers Mental Health Scale has been appended with the thesis APPENDIX-E)

3.4 DATA COLLECTION
Data collection was done in the Eastern Province of Kenya under permit no:OP.13/001/19C115/3 dated 7th June 1989
from the Kenya government. Eastern Province is a land of contrasts and many faces ranging from the equitorial forest
lands of the slopes of Mount. Kenya to the semi desert zones of Kitui. Covering an area of 160,133 square kilometers,
EASTERN PROVINCE DISTRICT BOUNDARIES

KEY
---: INTERNATIONAL BOUNDARIES

: DISTRICT BOUNDARIES

---: PROVINCIAL BOUNDARIES

---: DISTRICT BOUNDARIES
Eastern Province is the second largest province in the country after the Rift Valley Province with a total population of nearly 3 million people. Climatically the province varies enormously with different physical and ecological conditions. The province is the main source of electrical power supply for the country. Administratively, Eastern Province covers six districts namely Embu, which is the provincial headquarters; then Meru district, Isiolo district, Kitui district, Marsabit district and Machakos district. The 1984 survey by the Ministry of Education indicated that Eastern Province ranked 4th in the number of high schools in the province as compared to other provinces i.e. Machakos district 186, Meru district 110, Kitui district 54, Embu district 36, Marsabit district 3 and Isiolo district 2 total number of high schools in the province 391.

Collection of data was completed in two stages. In the first stage, data was collected for the standardization of Teachers Mental Health Scale (Description of data collection for the purpose of standardization of Teachers Mental Health Scale is submitted in Chapter IV).

After having finalized the other research tools, data collection for the final phase of the study was undertaken over a sample of 400 teachers. All the three tools namely the Maslach Burnout Inventory, Rotter's Locus of Control
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Scale and Teachers Mental Health Scale were administered personally (in a group of 5-20 teachers) by the investigator to 400 high school teachers (Urban and Rural Teachers). The tests were administered in the following manner. Firstly the Burnout Inventory was administered, followed by the Internal-External Locus of Control Scale, and lastly the Teachers Mental Health Scale.

The Provincial Education Officer (Eastern Province) and the District Education Officers from the 4 districts selected assisted the investigator in the selection of the schools.

All possible efforts were made to make the teachers feel at ease and respond to the various tests with full concentration. All queries were answered so as to satisfy their curiosity and motivate them to answer the questionnaires carefully. Efforts were made to get maximum cooperation of the teachers. They were informed that the results would be kept strictly confidential and that their cooperation was essential as the findings of the research would be beneficial to all present and future teachers.

Out of the 400 high school teachers (200 Urban high school teachers and 200 Rural high school teachers) selected for the final stage of the study, 385 were found suitable for the study (190 Urban teachers and 195 Rural teachers). 15 teachers were dropped due to their absence in one or the
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other session or due to incomplete response sheets.

3.5 SCORING OF THE TESTS

Scoring of the tests was done strictly in accordance with the directions given in the test manuals. The Maslach Burnout Inventory was scored for three dimensions; these are Emotional Exhaustion, Depersonalization and Personal Accomplishment. The Rotter's Internal-External Locus of Control was scored in two directions, i.e., Internal orientation, and External orientation, those having from 0-12 were categorised as Internally oriented and from 13 and above as Externally oriented. Teachers Mental Health Scale was scored on five dimensions and the sum of these five aspects gave the total score of Mental Health Scale. In all there were six sets of scores for the Teachers Mental Health Scale. These were Personal Well-being, Anxiety Factor, Disabling Symptoms, Capacity to Establish Constructive Relationships, Capacity to Cope with Ordinary Demands and Stress of Life, and teachers total Mental Health.
### TABLE 3.3

<table>
<thead>
<tr>
<th>SERIAL NO.</th>
<th>DESCRIPTION OF TOOLS/VARIABLES</th>
<th>CODES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Emotional Exhaustion</td>
<td>EE</td>
</tr>
<tr>
<td>2.</td>
<td>Depersonalization</td>
<td>DP</td>
</tr>
<tr>
<td>3.</td>
<td>Personal Accomplishment</td>
<td>PA</td>
</tr>
<tr>
<td>4.</td>
<td>Locus of Control</td>
<td>LOC</td>
</tr>
<tr>
<td>5.</td>
<td>Personal Well-being</td>
<td>PW</td>
</tr>
<tr>
<td>6.</td>
<td>Anxiety factor</td>
<td>AF</td>
</tr>
<tr>
<td>7.</td>
<td>Disabling symptoms</td>
<td>DS</td>
</tr>
<tr>
<td>8.</td>
<td>Capacity to Establish Constructive Relationship</td>
<td>CR</td>
</tr>
<tr>
<td>9.</td>
<td>Capacity to cope with Ordinary demands and stress of life</td>
<td>OD</td>
</tr>
<tr>
<td>10.</td>
<td>Teachers overall Mental Health</td>
<td>MH</td>
</tr>
<tr>
<td>11.</td>
<td>Teachers Mental Health Scale</td>
<td>TMHS</td>
</tr>
<tr>
<td>12.</td>
<td>Maslach Burnout Inventory</td>
<td>MBI</td>
</tr>
</tbody>
</table>

### 3.6 STATISTICAL TECHNIQUES USED FOR DATA ANALYSIS

Depending upon the purpose, different statistical techniques were used. These can be classified into three broad categories.

1. Techniques which were applied for the development of Teachers Mental Health Scale.

2. Techniques used to obtain general description of data on various variables.

3. Techniques employed for testing hypotheses.

These techniques are described below.
3.6.1 Statistical techniques used for the development of the Teachers Mental Health Scale:

Statistical techniques like mean, median, standard deviation and coefficient of correlations were worked out to find the reliability and validity of the Teachers Mental Health Scale.

3.6.2 Descriptive Analysis

Frequency distributions and descriptive statistics such as Mean's, SD's, SE's, Sk, Ku were computed to study the nature of distribution for score for the variables of Burnout, Locus of Control and Mental Health.

3.6.3 Differential Analysis:

The t-ratios were obtained to find out the significance of difference between the means of low and high groups and to study the significance of difference between the various demographic variables.

3.6.4 Correlations:

Product-Moment coefficient of correlations were worked out to study the inter-relationship of the different variables.