Chapter - III

*Method and Procedure*
METHOD AND PROCEDURE

The basic purpose of this study was to study burnout in relation to school climate, locus of control, role commitment, and socio-economic status among secondary school teachers. The basic premise of this study was that the Teacher’s Burnout will not be significantly related with the school climate, locus of control, role commitment and socio-economic status of teachers. In this chapter are described the details of the method and procedure adopted for achieving the objectives of this study. The chapter consists of the following sections:

3.1 Method of the study
3.2 Population
3.3 Sample
3.4 The tools
3.5 Description of tools
3.6 Data collection
3.7 Response rate
3.8 Data organization
3.9 Statistical techniques used
3.10 Statistical computations

3.1 METHOD OF THE STUDY

Since the present research work has been undertaken to study the Teacher’s Burnout in relation to school climate, locus of control, role commitment, and socio-economic status. Hence this study was conducted to study Burnout among the teachers at the secondary level in Allahabad district of Uttar Pradesh. The descriptive survey research method was adopted to complete this study. The descriptive survey research method enabled to study the Burnout
among secondary school teachers in relation to school climate, locus of control, role commitment, and socio-economic status.

3.2 POPULATION

All the teachers teaching at secondary school level in Allahabad district of Uttar Pradesh were defined as the population for this study during the year 2008-09.

3.3 SAMPLE

Since this population was very huge, a sample of 465 teachers, teaching at secondary school stage was selected through cluster sampling technique. For this first out of 156 secondary schools whether the government and private, 58 schools were selected and then all the teachers enrolled in these 58 schools were taken into the sample.

3.4 THE TOOLS

The study involved one dependent and four independent variables. They were

Dependent variable –
1. Teachers Burnout

Independent variable –
1. School Climate
2. Locus of Control
3. Role Commitment
4. Socio-Economic Status

So far as the tools of the study were concerned, only the standardized tests have been employed for obtaining reliable and valid data for dependable results. The tools used in the present study were described below.
3.5 DESCRIPTION OF THE TOOLS

The following tools were used for the proposed study.

3.5.1 Tool 1 - Burnout Scale (Maslach Burnout Inventory)

One of the main objective of this study was to study Burnout among teachers at secondary school level. To accomplish this objective the Job Burnout Inventory as developed by Maslach and Jackson (1981) was used to assess the degree of burnout of the subjects. The scale contains 22 items and each item to be rated on 7 point scale.

1. Never
2. Very mild
3. Mild
4. Somewhat moderate
5. Moderate
6. Somewhat strong
7. Strong

This scale measure 3 dimensions of job burnout

1. Emotional Exhaustion- A key aspect of the burnout syndrome is increased feelings of emotional exhaustion; as emotional resources are depleted, workers feel they are no longer able to give of themselves at a psychological level.

2. Depersonalization- Another aspect of the burnout syndrome is the development of depersonalization i.e. negative, cynical attitudes and feelings about one’s clients.

3. Personalization Accomplishment- Third aspect of the burnout syndrome, reduced personal accomplishment, refers to the tendency to evaluate oneself negatively, particularly with regard to one’s work with clients. Workers may feel unhappy about
themselves and dissatisfied with their accomplishments on the job.

The table 3.1 gives the details of items kept in different dimensions of the above scale.

**Table 3.1 Dimensionwise classification of items of burnout**

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Item no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional Exhaustion</td>
<td>1 to 9</td>
</tr>
<tr>
<td>Depersonalization</td>
<td>10 to 14</td>
</tr>
<tr>
<td>Personal Accomplishment</td>
<td>15 to 22</td>
</tr>
</tbody>
</table>

**Administration**

It can be administered individually as well as in groups. The test permits numbering of statements based on the 7 point scale on the test booklet itself. Testing time is usually about 10 – 15 minutes.

**Scoring**

Each statement to be rated on a continuum of never, very mild, mild, somewhat moderate, moderate, somewhat strong and strong with a scale of 1, 2, 3, 4, 5, 6, 7 respectively. The range of scores varied from, 22 – 154 as whole, 9 – 63, 5 – 35, and 8 – 56 for emotional exhaustion, depersonalization, and personal accomplishment respectively.

**Reliability**

Reliability of the scale was found 0.56 as a whole and of all three dimensions as

1. Emotional Exhaustion       0.87
2. Depersonalization          0.77
3. Personal Accomplishment    0.77
3.5.2 Tool 2- Organizational Climate Scale (OCI)

The second objective of this study was to study the Teachers Burnout in relation to organizational climate. Organizational Climate Inventory as developed by Som Nath Chattopadhyaya and K. G. Agarwal was used to accomplish this objective. It contains 70 items. Organizational climate is an outcome of interplay between a number of variables of the societal system, the organization, and the individual members.

Administration

It is largely administered individually. The test permits tick answers on the separate answer sheet. Testing time is usually about 20 - 25 minutes.

Scoring

The OCI consists 70 items. This test is a five point Likert type scale. It is manually scored with a stencil scoring key. Each answer scores 1, 2, 3, 4, or 5 points. A transparent scoring stencil key is placed on the answer sheet and the

<table>
<thead>
<tr>
<th>Sr.no.</th>
<th>Dimensions</th>
<th>Items nos.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Performance Standards</td>
<td>6, 9, 10, 13, 30, 31, 57</td>
</tr>
<tr>
<td>2</td>
<td>Communication Flow</td>
<td>12, 17, 24, 34, 37, 38, 49, 52, 61, 65, 67</td>
</tr>
<tr>
<td>3</td>
<td>Reward System</td>
<td>29, 41, 54, 66</td>
</tr>
<tr>
<td>4</td>
<td>Responsibility</td>
<td>4, 16, 27, 40</td>
</tr>
<tr>
<td>5</td>
<td>Conflict Resolution</td>
<td>1, 18, 23, 42, 44, 45, 46</td>
</tr>
<tr>
<td>6</td>
<td>Organizational Structure</td>
<td>14, 19, 21, 35, 47</td>
</tr>
<tr>
<td>7</td>
<td>Motivational Level</td>
<td>28, 32, 51, 56, 59, 68, 69</td>
</tr>
<tr>
<td>8</td>
<td>Decision Making Process</td>
<td>2, 15, 25, 36, 43, 62, 70</td>
</tr>
<tr>
<td>9</td>
<td>Support System</td>
<td>3, 5, 7, 8, 20, 48, 53, 55, 58</td>
</tr>
<tr>
<td>10</td>
<td>Warmth</td>
<td>26, 39, 60, 63, 64</td>
</tr>
<tr>
<td>11</td>
<td>Identity Problems</td>
<td>11, 22, 33, 50</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>70</strong></td>
</tr>
</tbody>
</table>
answer appear as pencil or pen marks in the boxes on the given test answer sheet. The marks on the answer sheet are visible through the squares for each question (item or answer), as indicated by the number printed above the square. One has to add these scores separately for all dimensions to get final scores.

Reliability and Validity

Reliability refers to the extent to which a measuring device yields consistent results upon testing and retesting, that is, dependability for predictive purposes. The split-half reliability of the scale was computed by the author of the test. The computed reliability co-efficient by Spearman-Brown formula was 0.898 which shows that there was high internal consistency in the instrument and hence it was highly reliable.

Factorial validity, face validity and item validity were computed by the author.

3.5.3 Tool 3- Locus of Control Scale (LOC)

The third objective of this study was to study the Teachers Burnout in relation to locus of control. Levenson’s locus of control scale adapted by Sanjay Vohra is a Likert type scale, with multiple choice responses presented in a continuum. Responses range from strongly agree, agree, undecided, disagree to strongly disagree. The scale consists 24 statements, 8 each for P- powerful others, C- chance control and I- individual control.

Dimensions-

This scale consists of three dimensions,

1. Powerful others- Belief about control by powerful others. High scores indicate that other people control your outcomes.

2. Chance control- Belief about chance control. High scores indicate that unordered, chance, or random events control your outcomes.
3. Individual control - Belief about individual control. High scores indicate you believe that your outcomes are controlled by you - that your current situations and your rewards are direct outcomes of things you control.

Table: 3.3 Dimension wise Classification of LOC

<table>
<thead>
<tr>
<th>Sl. no.</th>
<th>Dimensions</th>
<th>Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Powerful Others</td>
<td>3, 8, 11, 13, 15, 17, 20, 22</td>
</tr>
<tr>
<td>2</td>
<td>Chance Control</td>
<td>2, 6, 7, 10, 12, 14, 16, 24</td>
</tr>
<tr>
<td>3</td>
<td>Individual Control</td>
<td>1, 4, 5, 9, 18, 19, 21, 23</td>
</tr>
</tbody>
</table>

Administration

The test can be easily administered individually or in group and takes only about 10 – 15 minutes for completion. The instructions are printed clearly on the front page of the test booklet. It occasionally happens that a subject does not understand the meaning of a term or a word in the test booklet. In this case it is permissible for the examiner to give a dictionary definition, but no other assistance is allowed.

Scoring

This test is a five point Likert type scale which is to be manually scored with a stencil scoring key. Each answer scores 1, 2, 3, 4, or 5 points. A transparent scoring stencil key is placed on the test booklet and the answer appear as pencil or pen marks in the boxes on the given test booklet. The marks on the test booklet are visible through the circle for each factor, as indicated by the number printed above the circle. One has to add these scores separately for all three factors (P, C, and I)
Reliability and Validity

The split-half reliability of the scale was found to be 0.72 for P, 0.79 for C and 0.65 for I, using Spearman-Brown formula. Further, with odd – even method, reliability co-efficient was found to be 0.69 for P, 0.72 for C, and 0.66 for I. The test-retest reliability was also calculated and the co-efficient was found to be 0.76 by calculating co-efficient of correlation between two sets of the same scale, after one week time.

The present test shows fairly high reliability and the validity of the test is also higher.

3.5.4 Tool 4 - Teachers Role Commitment Scale (TRCS)

The fourth objective of this study was to study the Teachers Burnout in relation to role commitment. To achieve this objective the teachers’ role commitment scale as developed by Dr. M.B. Rathod and Madhulika Verma, was used. It contains 58 items. Role commitment of the teacher is the pledge or promise or obligation of teachers’ behaviour pattern according to certain rules and norms, concerning mainly pupil, own profession, school, society, parents and nation.

Dimensions-

TRCS consists of six dimensions,

1. Student- Commitment towards student.
2. School- Commitment towards school.
3. Parent- Commitment towards parent.
5. Nation- Commitment towards nation.
6. Profession- Commitment towards professions.
Administration

The teachers’ role commitment scale is a self-administering scale. The purpose of this scale is frankly explained to the subjects. It was assured that their responses will be kept confidential. It is emphasized that no item should be omitted and there is nothing right or wrong about these items. There is no time limit for the scale. However, it takes approximately 35 minutes to complete it.

<table>
<thead>
<tr>
<th>Area</th>
<th>Sub-Scale</th>
<th>Item Nos.</th>
<th>Total Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Student</td>
<td>1, 2, 4, 5, 6, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 30, 34, 52, 53</td>
<td>24</td>
</tr>
<tr>
<td>B</td>
<td>School</td>
<td>3, 9, 29, 37, 38, 44, 46, 47</td>
<td>8</td>
</tr>
<tr>
<td>C</td>
<td>Parent</td>
<td>31, 32, 33, 54</td>
<td>4</td>
</tr>
<tr>
<td>D</td>
<td>Society</td>
<td>25, 35, 39, 40, 45, 57</td>
<td>6</td>
</tr>
<tr>
<td>E</td>
<td>Nation</td>
<td>26, 36, 55, 58</td>
<td>4</td>
</tr>
<tr>
<td>F</td>
<td>Profession</td>
<td>7, 8, 27, 28, 41, 42, 43, 48, 49, 50, 51, 56</td>
<td>12</td>
</tr>
</tbody>
</table>

Scoring

The TRCS comprised of total 58 items. Items were developed in the form of statements and a three point rating scale was developed for each of them. The three alternative situations were provided in front of each item. The three alternative situations ranged from most committed to least committed situations. For response of most committed situations a score of “3” is given, for committed and least committed scores “2” and “1” are given respectively. The total scores varies from 58 to 174, showing lowest and highest role commitment for teachers. The scoring can be done according to the scoring key.

Reliability and Validity

Reliability of TRCS was established through test-retest method and split-half method. For the test-retest reliability, the correlation co-efficient was worked
out on the basis of the scores of the 187 teachers on two testing. The correlation coefficient was found to be 0.843. The split-half reliability co-efficient was also worked out. It was found to be 0.879. Both the reliability co-efficient were found to be high. Therefore, the TRCS was considered to be adequately reliable.

The content validity of the scale was established by having discussion with the expert from the field of both teacher education and school education. Thus, TRCS was found to be valid. The face validity of the test was also established. Thus TRCS was found to possess both face as well as content validity.

3.5.5 Personal Data Sheet

To know the biographical factors and socio-economic status the personal data sheet was developed by the investigator herself. The description of the personal data sheet is below given

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Variable</th>
<th>Description of Variables</th>
<th>Scoring</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Age</td>
<td>Up to 35 years</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>35 years – 45 years</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>More than 45 years</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>Sex</td>
<td>Male</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Female</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>Category of School</td>
<td>Government</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Private</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>Educational Qualification</td>
<td>Trained</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Educational Streams (Teaching)</td>
<td>Science</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Arts</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Commerce</td>
<td>3</td>
</tr>
<tr>
<td>5</td>
<td>Marital Status</td>
<td>Married</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Unmarried</td>
<td>2</td>
</tr>
<tr>
<td>6</td>
<td>Family Status</td>
<td>Single</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Joint</td>
<td>2</td>
</tr>
<tr>
<td>7</td>
<td>Family’s Monthly Income</td>
<td>Up to Rs. 10000</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rs. 10000 – Rs. 15000</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rs. 15000 – Rs. 20000</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>More than Rs. 20000</td>
<td>4</td>
</tr>
</tbody>
</table>
3.6 DATA COLLECTION PROCEDURE

For the achievement of the objectives of this study the data from the secondary school teachers was collected. The investigator took formal permission from the principals of the schools who gave their consent to collect the information for this study. The investigator approached the teachers teaching at secondary school stage and administered Personal Data Sheet, MBI, OCI, LOC, and TRCS. This data served the purpose and was put to statistical analysis according to the nature of the hypothesis framed in this study.

3.7 RESPONSE RATE

Out of the total 465 questionnaires administered to 465 teachers only 378 were got filled by the teachers. Out of these only 360 questionnaires were found to be usable. In this way a response rate of 77.4% was obtained. A response rate of 77.4% can be considered as quite satisfactory particularly in the light of the fact that it is quite difficult for school teachers to find time from their busy schedule and fill four questionnaires.

3.8 DATA ORGANIZATION

All the four scales (MBI, OCI, LOC, and TRCS) and personal data sheets were scored according to scoring procedures as described earlier. The scores on each of the sub-scales and total scores for MBI, OCI, LOC, and TRCS for each of the 360 teachers were taken down on a master chart. The informations over personal data sheet were coded into suitable categories and transferred over the master chart.

3.9 STATISTICAL TECHNIQUES USED

For achieving the objectives of this study following statistical techniques were used.
Mean-

The mean of distribution is commonly understood as the arithmetic average. It is computed by dividing the sum of all the scores by the number of scores.

Standard Deviation-

Standard deviation is a widely used measurement of variability or diversity used in statistics and probability theory. It shows how much variation or 'dispersion' there is from the average (mean, or expected value). A low standard deviation indicates that the data points tend to be very close to the mean, whereas high standard deviation indicates that the data are spread out over a large range of value.

\[
\sigma = \sqrt{\frac{\sum(x-\text{mean})^2}{N}}
\]

Correlation-

Correlation is a measure of the relation between two or more variables. The degree of relationship is measured and represented by the coefficient of correlation. Correlation coefficient can range from -1.00 to +1.00. The value of -1.00 represents a perfect negative correlation while a value of +1.00. Pearson’s product moment correlation is used in this study. The correlation provides “a measure of the degree and direction of relationship between variables” (Graziano & Raulin, 1997).

Pearson product moment correlation co-efficient, \( r \), may be calculated as,

\[
r = \frac{\Sigma xy - \Sigma x \Sigma y}{\sqrt{\Sigma x^2 - (\Sigma x)^2} \sqrt{\Sigma y^2 - (\Sigma y)^2}}
\]

Where,

\( r \) = Pearson \( r \) correlation coefficient
\( n \) = number of value in each data set
\( \Sigma xy \) = sum of the products of paired scores
\( \Sigma x \) = sum of \( x \) scores on one variable
\[ \Sigma y = \text{sum of y scores on other variable} \]
\[ \Sigma x^2 = \text{sum of squared x scores} \]
\[ \Sigma y^2 = \text{sum of squared y scores} \]

**t-test-**

The t-test is the most commonly used method to evaluate the differences in means between two groups. The t-test gives an indication of the separateness of two sets of measurement, and is thus used to check whether two sets of measures are essentially different. In order to find out the significance of difference t-test was used. The formula for t-test is

\[
t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{\left(\frac{\Sigma (x_1 - \bar{x}_1)^2}{n_1} + \frac{\Sigma (x_2 - \bar{x}_2)^2}{n_2}\right) \left(\frac{1}{n_1} + \frac{1}{n_2}\right)}}
\]

**F-test-**

Analysis of variance (ANOVA) is a statistical method that analyses the independent and interactive effects of two or more independent variables on a dependent variable (Kerlinger, 1983). ANOVA provides an effective way to determine whether the means of more than two samples are too different to attribute to sampling error. The F – ratio is computed by using the following formula.

\[
F = \frac{s_1^2}{s_2^2}
\]

Where \( s_1^2 \) is the variance of the first group and \( s_2^2 \) is the variance of the second group

The critical values of F – ratio are found in F table, which indicates the critical values necessary to test the null hypothesis of selected levels of significance.
Multiple Regression Technique -

Multiple regression is a statistical technique that allows us to predict someone’s score on one variable on the basis of their scores on several other variables. Multiple regression allows us to identify a set of predictor variables which together provide a useful estimate of a participant’s likely score on a criterion variable. Multiple regression is simply an extension of this principle, where we predict one variable on the basis of several other variables. Having more than one predictor variable is useful when predicting human behavior, as our actions, thoughts, and emotions are likely to be influenced by some combination of several factors.

Multiple Regression is the term used for predicting Y from two or more independent variables combined. The formula for multiple regression is just an extension of that for linear regression

\[ Y = a + b_1x_1 + b_2x_2 + \ldots \]

Where Y = the variable to be predicted

- \( a \) = constant or intercept
- \( b_1 \) = the slope of the first predictor
- \( b_2 \) = the slope of the second predictor
- \( x_1 \) = the score on the first predictor
- \( x_2 \) = the score on the second predictor

3.11 STATISTICAL COMPUTATIONS

Depending upon the hypotheses the above statistical tests were applied to verify them. The entire statistical calculations were done on computers by Dr. B.S. Nagi.