CHAPTER – III
RESEARCH DESIGN

The third step of the scientific research is to prepare a research design. A research design is a mapping strategy, which is based on sampling technique. It includes objectives, hypotheses, sampling, Research strategy, method used, tools & techniques for collecting evidences and analyzing the data. A research design is the work before getting the project underway. A research design includes the following components: -

1. Objectives of the study
2. Hypotheses of the study
3. Research method & research strategy
4. Sampling design
5. Choice of the research tools
6. Data collection
7. Choice of statistical techniques

Research design is a blue print of procedure that enables the researcher to test hypothesis by reaching valid conclusion about relationships between independent and dependent variable. In the views of Nokerling’er, Research design has two basic purposes: -

- To provide answers to research questions.
- To control variances.

Research design is devised to enable the researcher to justify the research findings in terms of reliability, validity, objectivity and accuracy. Any research plan is deliberately and specifically conceived and executed to have empirical evidence to work our research problems.

Objectives of the study:

The present study was designed to realize the following objectives:-

1. To find out the relationship of burnout, self-efficacy and emotional intelligence of secondary school teachers.
2. To find out the relationship of burnout and self-efficacy of secondary school teachers.
3. To find out the relationship of burnout and emotional intelligence of secondary school teachers.
4. To compare the difference between burnout of male and female teachers of secondary school.
5. To compare the difference between self-efficacy of male and female teachers of secondary school.
6. To compare the difference between emotional intelligence of male and female teachers of secondary school.
7. To compare the difference between burnout of secondary school teachers working in rural and urban area.
8. To compare the difference between self-efficacy of secondary school teachers working in rural and urban area.
9. To compare the difference between emotional intelligence of secondary school teachers working in rural and urban area.
10. To compare the difference between burnout of secondary school teachers working in private and government schools.
11. To compare the difference between self-efficacy of secondary school teachers working in private and government schools.
12. To compare the difference between emotional intelligence of secondary school teachers working in private and government schools.

**Hypotheses of the study:**

The following hypotheses have been formulated for verification:

1. There is no significant relationship between burnout and self-efficacy of secondary school teachers.
2. There is no significant relationship between burnout and emotional intelligence of secondary school teachers.
3. There is no significant difference between burnout in male and female secondary school teachers.
4. There is no significant difference between self-efficacy in male and female secondary school teachers.

5. There is no significant difference between emotional intelligence in male and female secondary school teachers.

6. There is no significant difference between burnout in rural and urban areas secondary school teachers.

7. There is no significant difference between self-efficacy in rural and urban areas secondary school teachers.

8. There is no significant difference between emotional intelligence in rural and urban areas secondary school teachers.

9. There is no significant difference between burnout of secondary school teachers working in private and government schools.

10. There is no significant difference between self-efficacy of secondary school teachers working in private and government schools.

11. There is no significant difference between emotional intelligence of secondary school teachers working in private and government schools.

**Research method used**

For investigation and collection of the data descriptive survey method was used to find out the relationship between burnout and self-efficacy, burnout and emotional intelligence, and to find out any significant difference between the mean scores of burnout, self-efficacy and emotional intelligence of rural/urban, private/government and male/female secondary school teachers. For the collection of the data the researcher surveyed the different schools located in the Haryana state for urban/rural as well as private/government secondary school teachers and administered the emotional intelligence scale, burnout scale and self-efficacy scale on the teachers of secondary schools.

**Sampling Strategies**

Sample is fundamental to the conduct of research and interpretation of its results. Barring the unusual instance in which a complete sense is taken, research is almost invariably conducted by means of a sample on the basis of which generalization applicable to the population from which the sample obtained is reached.
A random sampling technique was used for the selection of the sample. The sample constituted 400 regular secondary school teachers from different district which was selected from 40 schools. Out of 400 secondary school teachers, 200 were male and 200 were female teachers from rural/urban and private/government schools. In view of the importance of sampling the investigator selected the following schools:

**Table-I**

**Name of Urban Secondary Schools (Government & Private) from where data were collected**

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Name of the School</th>
<th>Designation Of Job</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Govt. Sr. Sec. School, Meham</td>
<td>Secondary</td>
</tr>
<tr>
<td>2.</td>
<td>Govt. Sr. Sec. School, Sampla</td>
<td>Secondary</td>
</tr>
<tr>
<td>3.</td>
<td>Govt. Sr. Sec. School, Kalanaur</td>
<td>Secondary</td>
</tr>
<tr>
<td>4.</td>
<td>Govt. Sr. Sec. School, Rohtak</td>
<td>Secondary</td>
</tr>
<tr>
<td>5.</td>
<td>Govt. Sr. Sec. School, Rohtak Camp</td>
<td>Secondary</td>
</tr>
<tr>
<td>6.</td>
<td>Govt. Sr. Sec. School, Hansi</td>
<td>Secondary</td>
</tr>
<tr>
<td>7.</td>
<td>Govt. Sr. Sec. School, Hissar</td>
<td>Secondary</td>
</tr>
<tr>
<td>8.</td>
<td>Govt. Sr. Sec. School, Agroha</td>
<td>Secondary</td>
</tr>
<tr>
<td>9.</td>
<td>Govt. Sr. Sec. School, Narnaud</td>
<td>Secondary</td>
</tr>
<tr>
<td>10.</td>
<td>Govt. Sr. Sec. School, Jind</td>
<td>Secondary</td>
</tr>
<tr>
<td>11.</td>
<td>Jat Sr. Sec. School, Hissar</td>
<td>Secondary</td>
</tr>
<tr>
<td>12.</td>
<td>SD Sr. Sec. School, Hansi</td>
<td>Secondary</td>
</tr>
<tr>
<td>13.</td>
<td>Vaish Sr. Sec. School, Rohtak</td>
<td>Secondary</td>
</tr>
<tr>
<td>15.</td>
<td>Model Sr. Sec. School, Rohtak</td>
<td>Secondary</td>
</tr>
<tr>
<td>17.</td>
<td>Jain Sr. Sec. School, Rohtak</td>
<td>Secondary</td>
</tr>
<tr>
<td>18.</td>
<td>SD Sr. Sec. School, Jind</td>
<td>Secondary</td>
</tr>
<tr>
<td>19.</td>
<td>SD Sr. Sec. School, Narwana</td>
<td>Secondary</td>
</tr>
<tr>
<td>20.</td>
<td>God Sr. Sec. School, Rohtak</td>
<td>Secondary</td>
</tr>
</tbody>
</table>
Table-II

Name of Rural Secondary Schools (Government & Private) from where data were collected

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Name of the School</th>
<th>Designation of Job</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Govt. Sr. Sec. School, Bhuakbarpur</td>
<td>Secondary</td>
</tr>
<tr>
<td>2.</td>
<td>Govt. Sr. Sec. School, Titoli</td>
<td>Secondary</td>
</tr>
<tr>
<td>3.</td>
<td>Govt. Sr. Sec. School, Bainsi</td>
<td>Secondary</td>
</tr>
<tr>
<td>4.</td>
<td>Govt. Sr. Sec. School, Kathura</td>
<td>Secondary</td>
</tr>
<tr>
<td>5.</td>
<td>Govt. Sr. Sec. School, Sanghi</td>
<td>Secondary</td>
</tr>
<tr>
<td>6.</td>
<td>Govt. Sr. Sec. School, Kalwa</td>
<td>Secondary</td>
</tr>
<tr>
<td>7.</td>
<td>Govt. Sr. Sec. School, Mauna</td>
<td>Secondary</td>
</tr>
<tr>
<td>8.</td>
<td>Govt. Sr. Sec. School, Karsindhu</td>
<td>Secondary</td>
</tr>
<tr>
<td>9.</td>
<td>Govt. Sr. Sec. School, Kinana</td>
<td>Secondary</td>
</tr>
<tr>
<td>10.</td>
<td>Govt. Sr. Sec. School, Kheri</td>
<td>Secondary</td>
</tr>
<tr>
<td>11.</td>
<td>Neki Ram Sr.S. School, Lakhan Majra</td>
<td>Secondary</td>
</tr>
<tr>
<td>12.</td>
<td>M.G.M. Sr. Sec School, Titoli</td>
<td>Secondary</td>
</tr>
<tr>
<td>13.</td>
<td>Sanskriti S.S.S. Brahmanvas</td>
<td>Secondary</td>
</tr>
<tr>
<td>15.</td>
<td>Green Vally S.S.S, Titoli</td>
<td>Secondary</td>
</tr>
<tr>
<td>16.</td>
<td>Baba B. B. S.S.S, Titoli</td>
<td>Secondary</td>
</tr>
<tr>
<td>17.</td>
<td>RKPSS School, Madina</td>
<td>Secondary</td>
</tr>
<tr>
<td>18.</td>
<td>Shiv S.S. School, Gatoli</td>
<td>Secondary</td>
</tr>
<tr>
<td>20.</td>
<td>Rishikul SSS, Bhutol Jatan</td>
<td>Secondary</td>
</tr>
</tbody>
</table>
Research Tools used and their Descriptions

The following standardized tools were selected for the study:

- A scale of assessing burnout developed by Chistina Maslach Susan. E. Jackson Richar. L. Schwab.
- A brief questionnaire for measuring self-efficacy in teachers developed by Bandura.
- Emotional Intelligence Scale (EIS) by Anukool Hyde Sanjyot pethe and Upinder Dhar.

Maslach Burnout Survey

Maslach burnout survey has been developed and standardized by Christina Maslach and Susan E. Jackson, 1986. It is a paper pencil test. This test consists of 22 items and all the items are written in the form of statements about personal feeling or attitudes. Items for the test were designed to measure hypothetical aspects of the burnout syndrome. Each aspect of the burnout i.e. emotional exhaustion (EE), depersonalization (DP), and lack of personal accomplishment (PA) is measured by a separate sub scale. The emotional exhaustion sub scale consists nine items and assesses feelings of being emotionally overextended and exhausted by one’s work. The five items in depersonalization sub scale measure an unfeeling and impersonal response towards recipients of one’s service, care, treatment or instructions. The sub-scale of personal accomplishment contains eight items, which asses feeling of competence and successful achievement in one’s work with people. The frequency that the respondent experience feelings related to each sub-scale is assessed using a seven point fully anchored response format. The Maslach Burnout Survey is given in Appendices.

Reliability of Maslach Burnout Survey

Iwanicki and Sachwab presented evidence substantiating the reliability of this test, when the adaptation was made for use the scale with teachers at least in the instance of the emotional exhaustion subscale for which internal consistency co-efficient alpha estimates of reliability were .90 and .89 respectively for the frequency and intensity dimension. For depersonalization sub-scale .76 and .75 and for the personal accomplishment corresponding reliabilities of only .76 and .73 were obtained. Split-half method reliability for the Maslach Burnout Survey has been reported as .74 and .81
Validity of Maslach Burnout Survey

Concurrent validity was determined in the following manner, first by correlating sub scales scores with independent behavioral ratings completed by subjects spouses and co-workers and second by correlating sub scale scores with scores on the job diagnostic survey, Hack man & Oldham; 1975, significant correlation for each of these methods range from .20 to .48 on the emotional exhaustion sub-scale, from .32 to .57 for the depersonalization measure and from .25 to .27 on the personal accomplishment sub scale.

Scoring of Maslach Burnout Survey

This survey is composed of 22 statements; out of which 7 were positively worded and rests of 15 were negatively worded. These statements were rated in a 7-point scale. The scores for every rating point are given in the table below:-

Table-III
Scoring procedure of Maslach Burnout Survey

<table>
<thead>
<tr>
<th>How often</th>
<th>Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>0</td>
</tr>
<tr>
<td>A few times a year or less</td>
<td>1</td>
</tr>
<tr>
<td>Once a month or less</td>
<td>2</td>
</tr>
<tr>
<td>A few times in a month</td>
<td>3</td>
</tr>
<tr>
<td>Once a week</td>
<td>4</td>
</tr>
<tr>
<td>A few times a week</td>
<td>5</td>
</tr>
<tr>
<td>Everyday</td>
<td>6</td>
</tr>
</tbody>
</table>

The sum of the scores of item 1, 2, 3, 6, 8, 13, 14, 16 and 20 gave the score for emotional exhaustion dimensions. For depersonalization, sum of values of 5, 10, 11, 15 and 22 gave the score and the sum of the values of 4, 7, 9, 12, 17, 18, 19 and 21 gave the score of personal accomplishment dimensions respectively. The item 23 gave score for coping pattern of teachers.

Bandura’s Instrument of Teachers Self-efficacy Scale

This questionnaire is designed to help us to gain a better understating of kinds of things that create difficulties for teachers in their schools activities. The self-efficacy of the subjects was measured through a job specific self-efficacy scale developed by A. E.
Bandura, 1977 (English Version) which is based on his conceptualization of strength and certainty for performance level.

This questionnaire contains seven major areas or dimensions as: efficacy to influence decision making; efficacy to influence school resources; instructional efficacy, disciplinary efficacy, efficacy to enlist parental involvement, efficacy to enlist community involvement and efficacy for create positive school climate. All the items of Bandura’s Instrument of Teachers Self-efficacy Scale, 1977 were translated in to Hindi language by the researcher for making it convenient to Indian elementary school teachers.

The first dimension consists of 2 items/statements which assess the decisions influenced by the teachers that are made in the school and free expression ‘some influence’, ‘quite a bit’ and ‘a great deal’. The teacher self-efficacy scale is given in appendices.

Reliability of Bandura’s Instrument of Teachers Self-efficacy Scale

The reliability of the total test was estimated in terms of coefficient of correlation by applying split-half method, which equated to 0.702666.

Validity of Bandura’s Instrument of Teachers Self-efficacy Scale

To assess the construct validity of the scale, the scores were correlated with Riggs, et al. (1944) scale of personal efficacy. It yielded a correlation coefficient of .73.

Scoring of Bandura’s Instrument of Teachers Self-efficacy Scale

The items are scored on a five point scale ranging from 1) nothing, 2) very less, 3) some effect, 4) high effect and 5) very high effect. There are no negatively phrased statements. Only positive statements are included in the scale. This scale indicating higher the score better the self-efficacy. An overall self-efficacy score can be obtained by adding up individual item scores. The scoring of the scale was done according to the scoring key as: nothing-1, very less-2, some effect-3, high effect-4 and very high effect-5.

Emotional Intelligence Scale (EIS)-(2007)

This test was originally developed by Anukool Hyde Sanjyot pethe and Upinder Dhar. This test consists of 34 items and measures emotional intelligence through ten factors:

- Self-Awareness
Empathy
Self-motivation
Emotional stability
Managing relations
Integrity
Self-Development
Value orientation
Commitment
Altruistic Behavior

Reliability: - The reliability of the scale was determined by calculating reliability coefficient of a sample of 200 subjects. The split half reliability coefficient was found to be 0.88.

Validity: - Besides face validity, as all items were related to the variable under focus, the scale has high content validity. It is evident from the assessment of Judges/experts that items of the scale are directly related to the concept of emotional intelligence. In order to find out the validity from the coefficient of reliability (Garrette, 1981), the reliability index was calculated, which indicated high validity on account of being 0.93.

Factors of Emotional Intelligence: -

(i) **Self-awareness** is being of oneself and is measured by items 6,12,18,29. These items are “I can continue to do what I believe in even under severe criticism,” I have my priorities clear,” I believe in myself, and “I have built rapport and made and maintained personal friendships with work associates. “This factor is the strongest and explains 26.8% variance and has a total factor load of 2.77. The correlation of this factor with total score is 0.66.

(ii) **Empathy** is feeling and understanding the other person and is measured by items 9,10,15,20 and 25. These are “I pay attention to the worries and concerns of others,” I can listen to someone without the urge to say something, “I try to see the other person’s point of view, “I can stay focused under pressure, and “I am able to handle multiple demands. “This factor explains 7.3% variance with a total factor load of 3.11. The correlation of the factor with total score is 0.70.
(iii) **Self-motivation** is being motivated internally and is measured by 2, 4, 7, 8, 31 and 34. These items are “People tell me that I am an inspiration for them,” I am able to make intelligent decisions using a healthy balance of emotions and reason, “I am able to assess the situation and then behave,” I can concentrate on the task at hand in spite of disturbances, “I think feelings should be managed, and “I believe that happiness is an attitude. “This factor accounts for 6.3% variance and a total factor load of is 3.28. Its correlation with total score is 0.77.

(iv) **Emotional stability** is measured by items 14, 19, 26 and 28. These are “I do not mix unnecessary emotions with issues at hand, “I am able to stay composed in both good and bad situations, “I am comfortable and open to novel ideas and information, and “I am persistent in pursuing goals despite obstacles and setbacks. “This factor explains 6.0% variance with a total factor load of 2.51. The correlation of this factor with total score is 0.75.

(v) **Managing relations** is measured by 1, 5, 11 and 17. The statements that measure this factor are “I can encourage others to work even when things are not favorable, “I do not depend on others’ encouragement to do my work well, “I am perceived as friendly and outgoing, and “I can see the brighter side of any situation”. This factor explains 5.3% variance with a total factor load of 2.38. The correlation of this factor with total score is 0.67.

(vi) **Integrity** is measured by items 16, 27 and 32. “I can stand up for my beliefs, “I pursue goals beyond what is required of me, and “I am aware of my weaknesses” are the statements that measure this factor. This factor explains 4.6% variance with a total factor load of 1.88.

(vii) **Self-development** is measured by item 30 and 33 which are “I am able to identify and separate my emotions and “I feel that I must develop myself even when my job does not demand it” and explains 4.1% variance with a total load of 1.37.

(viii) **Value orientation** is measured by items 21, 22. The statements are “I am able to maintain the standards of honesty and integrity, and “I am able to confront
unethical actions in others” and explain 4.1% variance with a total factor load of 1.29.

(ix) **Commitment** is measured by the items 23 and 24. “I am able to meet commitments and keep promises and “I am organized and careful in my work” measure this factor. This factor accounts for 3.6% variance with a total factor load of 1.39.

(x) **Altruistic behavior** is measured by the items 3 and 13. The items are “I am able to encourage people to take initiative, and” I can handle conflicts around me. “It explains 3.0% variance with a total factor load of 1.3.

**For the administration** of these tests on the teachers, the investigator gave the instructions as according to the manual. The instructions were as: -

(i) There is no time limit for the completion of this test but it will hardly take 10-15 minutes to finish-up.

(ii) Before administrating the scale, it is advisable to emphasize orally that responses should be checked as for the same. The responses will be kept confidential.

(iii) It was also emphasized that there is no right or wrong answers to the statements. The statements are designed to understand the differences in individual reactions to various situations. The scale is meant to know the difference between individuals and not meant to rank them as good or bad.

(iv) It was duly emphasized that all statements have to be responded to and no statements should be left unanswered.

(v) Though the scale is self-administering, it has been found useful to read out the instructions printed on the response sheet to the teachers.

The test was administered to the 400 teachers in the above-mentioned schools. The above instructions were given to them before administration of the test.

Each item or statement should be scored 5 for strongly agree, 4 for agree, 3 for neutral, 2 for disagree and 1 for strongly disagree.

**Administration of the Tests and Data Collection**

The investigator visited the schools personally for the collection of necessary data. He too the prior permission of the headmasters/headmistress/principals of the schools for data collection. He discussed in detail about his investigation with heads of
the respective schools and sought the permission from them for data collection, the
subjects (teachers) were also explained about the nature and purpose of the study.
At the time of administration of the test, necessary steps were taken into consideration.
Necessary precautions were taken in each school. After being satisfied with the
arrangement, the investigator instructed the subjects (teachers) to do the assignment
carefully. Before the subjects attempted at the test, instructions were made clear with
regard to each test used in the study. They were also informed that their academic career
would not be affected as it was only an exercise for research purpose and their responses
would keep strictly confidential. Hence they should be free and frank, honest and sincere
in attempting the questions. The data was collected individually from the subjects. The
data was collected in two phases. In the first phase, emotional intelligence scale and self-
efficacy scale were administered with teachers. Then the burnout test was used in the
second phase.

In order to free them from boredom, they were given sufficient time for answering
the questions. Thus, the tests were administered under proper testing conditions. Each
session of testing, ended with a vote of thanks to the teacher concerned.

**Statistical Techniques Used**

The following statistical techniques were used for the analysis and interpretation
of the data:

(i) Mean
(ii) Standard Deviation
(iii) t-test

**Delimitations**

- The present study was confined to Secondary School Teachers only.
- The sample was restricted to 400 Secondary School Teachers.
- The present study was confined to twenty urban and twenty rural area schools
  only.
- Sample for urban schools and rural schools were confined to Haryana State.
- Sample for private and government schools were confined to Haryana State.