CHAPTER III

RESEARCH METHOD
Chapter- III

RESEARCH METHOD

Introduction

The present study is entitled as: “Occupational Stress, Job Burnout, Coping Mechanisms and Psychological Health among teachers”. In this chapter locale of the study, objectives and hypotheses of the study, the different variables considered and their operational definitions, tools used for data collection, procedure and statistical techniques are explained and summary is given.

3.1 Locate of the Study

The locale of the present study is Mysore city in India. The city of Mysore is spread over an area of 37.37 sq km with a total population of nearly 1000,000 people. It is about 141 km away from Bangalore, which the capital of Karnataka State. It is located in south India and situated 763 meters above sea level. The city of Mysore is a cultural centre of south India and is a well known tourist spot as it is a city of palaces. It has also attained a status of educational and industrial centre and is growing with rapid rate.

3.2 Statement of the Problem

“Occupational Stress, Job Burnout, Coping Mechanisms and Psychological Health among School Teachers”
3.3 Operational Definitions

For the purpose of this study, the following definitions of the terms apply:

*Occupational Stress.* Occupational stress can be defined as the harmful physical and emotional responses that occur when the requirements of the job do not match the capabilities, resources, or needs of the worker. Job stress can lead to poor health and even injury (Bandura, 1986).

*Job Burnout.* In this study, job burnout refers to a psychological syndrome of emotional exhaustion, depersonalization, and reduced personal accomplishment that can occur among individuals who work with other people in some capacity (Maslach, 1993; 1998).

*Emotional Exhaustion.* In this study, emotional exhaustion refers to feelings of being emotionally overextended and depleted of one’s emotional resources (Maslach, 1993).

*Depersonalization.* In this study, depersonalization refers to a negative, callous or excessively detached response to other people who are usually the recipients of one’s service or care (Maslach, 1993).

*Personal Accomplishment.* In this study, personal accomplishments refer to a decline in one’s feelings of competence and self-efficacy (Maslach, 1993).

*Coping Mechanism.* In this study the term “Coping” refers to ‘constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing’ (Lazarus & Folkman, 1984).

Coping strategies are organized into two categories: *Problem-focused.* Problem-focused strategies are mainly directed towards the management or alteration of a stressor.
Emotion-focused: Emotion-focused strategies are aimed at regulating emotional responses to the problem (Folkman & Lazarus, 1980; Lazarus & Folkman, 1984).

Psychological Health. In this study the term “psychological health” refers to “a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community” (WHO, 2013).

Primary School Teachers. For the purpose of this study, a primary school teacher is referred to as any individual certified to teach Grades 1 through 7.

High School Teachers. For the purpose of this study, a high school teacher is referred to as any individual certified to teach Grades 8 through 10.

School Teachers. In this study the term school teachers’ represents, government and private, primary and high school teachers of North and South Mysore, Karnataka State, India.

Teaching Experience. In this study the teaching experience represents five groups of teaching experience of school teachers those are: <5, 6-10, 11-15, 15-20 and above 20 years.

3.4 Objectives of the Study

1. To study relationship between occupational stress, job burnout, coping mechanisms and psychological health among school teachers.
2. To study difference between the following with reference to occupational stress among school teachers.
   a. Gender (Male and Female)
   b. Type of School (High school and Primary School)
c. Management of school (Government and Private)

d. Teaching experience

3. To study difference between the following with reference to job burnout among school teachers.
   a. Gender (Male and Female)
   b. Type of School (High school and Primary School)
   c. Management of school (Government and Private)
   d. Teaching experience

4. To study difference between the following with reference coping mechanisms among school teachers.
   a. Gender (Male and Female)
   b. Type of School (High school and Primary School)
   c. Management of school (Government and Private)
   d. Teaching experience

5. To study difference between the following with reference to psychological health among school teachers.
   a. Gender (Male and Female)
   b. Type of School (High school and Primary School)
   c. Management of school (Government and Private)
   d. Teaching experience
3.5 Hypotheses

In the purview of above objectives the following null hypotheses are formulated:

1. There is no significant relationship between occupational stress, job burnout, coping mechanisms and psychological health among school teachers.

2. There is no significant difference between male and female high school teachers with reference to occupational stress, job burnout, coping mechanisms and psychological health.

3. There is no significant difference between male and female primary school teachers with reference to occupational stress, job burnout, coping mechanisms and psychological health.

4. There is no significant difference between high school and primary school teachers with reference to occupational stress, job burnout, coping mechanisms and psychological health.

5. There is no significant difference between male and female government high school teachers with reference to occupational stress, job burnout, coping mechanisms and psychological health.

6. There is no significant difference between male and female government primary school teachers with reference to occupational stress, job burnout, coping mechanisms and psychological health.

7. There is no significant difference between male and female private high school teachers with reference to occupational stress, job burnout, coping mechanisms and psychological health.
8. There is no significant difference between male and female private primary school teachers with reference to occupational stress, job burnout, coping mechanisms and psychological health.

9. There is no significant difference between private and government high school teachers with reference to occupational stress, job burnout, coping mechanisms and psychological health.

10. There is no significant difference between private and government primary school teachers with reference to occupational stress, job burnout, coping mechanisms and psychological health.

11. There is no significant difference between different teaching experience of teachers with reference to occupational stress, job burnout, coping mechanisms and psychological health.

3.6 Variables Considered for the Study

**Dependent variables:** Occupational Stress, Job Burnout, Coping Mechanisms, and Psychological Health.

**Independent Variables:** Type of schools, Management of schools, Teaching experience and Gender

3.7 Design of the Study

The present study is an analytical, descriptive study. In the present study Occupational Stress, Job Burnout, Coping Mechanisms and Psychological Health among teachers has been studied. And also the differences of categories of teachers (gender,
length of experience, subject, type of school, and age) with reference to their Occupational Stress, Job Burnout, Coping Mechanisms and Psychological Health have been studied. The data was collected using different tools mainly through survey method. The data thus collected was analyzed and interpreted using descriptive statistics, contingency coefficient analysis, Pearson’s product moment correlation, Independent samples’ t tests and one way followed by post hoc tests.

3.8 Sample of the Study

Table 3.1
Total Number of Schools and Teachers in Mysore City

<table>
<thead>
<tr>
<th>Type of Schools</th>
<th>Government Schools</th>
<th>Private Schools</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Primary School</td>
<td>High School</td>
</tr>
<tr>
<td>Total Number of Schools</td>
<td>80</td>
<td>20</td>
</tr>
<tr>
<td>Total Number of Teachers</td>
<td>689</td>
<td>275</td>
</tr>
</tbody>
</table>

Table 3.2
Sample of Schools and Teachers in Mysore City

<table>
<thead>
<tr>
<th>Type of Schools</th>
<th>Government Schools</th>
<th>Private Schools</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Primary School</td>
<td>High School</td>
</tr>
<tr>
<td>Total Number of Schools</td>
<td>66</td>
<td>19</td>
</tr>
<tr>
<td>Total Number of Teachers</td>
<td>248</td>
<td>162</td>
</tr>
</tbody>
</table>
3.8.1 Selection of Schools

Among the schools population available at present, 66 government primary schools, 66 private primary schools, 19 government high schools, 52 private high schools were chosen for the study, using “stratified random sample”.

3.8.2 Selection of Teachers

All the teachers working in government/private primary and high schools in Mysore City constituted the population of the present study. Sample size was calculated according to the table provided by Krejcie and Morgan (1970). Regarding the population of teachers working in government primary schools that is 689, the sample of teachers is 248, and regarding the population of teachers working in private primary schools that is 360, the sample of teachers is 186.

Regarding the population of teachers working in government high schools that is 275, the sample of teachers is 162 and regarding the population of teachers working in private high schools that is 513, the sample of teachers is 226.

3.9 Tools used for Data Collection

The following tools were used for collection of the data required for the present study.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Tools</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occupational Stress</td>
<td>Occupational Stress Index</td>
<td>Srivastava&amp; Singh</td>
</tr>
<tr>
<td>Job Burnout</td>
<td>Maslach Burnout Inventory</td>
<td>Maslach and Jackson</td>
</tr>
<tr>
<td>Coping Mechanisms</td>
<td>Ways of Coping Questionnaire</td>
<td>Lazaru and Folkman</td>
</tr>
<tr>
<td>Psychological Health</td>
<td>General Health Questionnaire</td>
<td>David Goldberg</td>
</tr>
</tbody>
</table>
3.9.1 Occupational Stress Index

In the present study, the researcher used a standard test to measure the Occupational Stress Index, developed by Srivastava and Singh (1984). The scale consisted of forty six items, each to be rated on five point scale. Out of 46 items, 28 are true keyed and rests 18 are false keyed. Split half method was applied to establish the reliability of the scale which was found to be 0.935 by the authors. This tool has been used in some recent studies among school teachers (Nagra & Arora, 2013; Lath, 2012, Singh, 2011, 2012; Latif & Sultana, 2009)\(^1\).

3.9.1.1 Scoring of Occupational Stress Index

The Occupational Stress Index (Srivastava, A.K., and Singh, A.P., 1981) was used for data collection. The scale consists of 46 items, each to be rated on the five point scale. Out of 46 items 28 are ‘True – Keyed’ and last 18 are ‘False – Keyed’. The items relate to almost all relevant components of the job size which cause stress in some way or the other, such as, role over-load, role ambiguity, role conflict, unreasonable group and political pressure, responsibility for persons, under participation, powerlessness, poor peer relations, intrinsic, impoverishment, low status, strenuous working conditions and unprofitability.

\(^1\) For more information refer to page 21.
The following Table gives an account of the items constituting various sub-scales of the Occupational Stress Index (O.S.I.).

Table 3.4

Items of various sub-scales of O.S.I.

<table>
<thead>
<tr>
<th>No.</th>
<th>Sub-Scales</th>
<th>Serial No. of the items in Schedual</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Role overload</td>
<td>1,13,25,,36,44,46</td>
</tr>
<tr>
<td>2</td>
<td>Role ambiguity</td>
<td>2,14*,26,37</td>
</tr>
<tr>
<td>3</td>
<td>Role conflict</td>
<td>3,15*,27,38*,45</td>
</tr>
<tr>
<td>4</td>
<td>Unreasonable Group &amp; Political Pressure</td>
<td>4,16,28,39</td>
</tr>
<tr>
<td>5</td>
<td>Responsibility for Persons</td>
<td>5,17,29,</td>
</tr>
<tr>
<td>6</td>
<td>Under participation</td>
<td>6*,18*,30*,40*</td>
</tr>
<tr>
<td>7</td>
<td>Powerlessness</td>
<td>7*,19*,31*</td>
</tr>
<tr>
<td>8</td>
<td>Poor peer relations</td>
<td>8*,20*,32*,41*</td>
</tr>
<tr>
<td>9</td>
<td>Intrinsic Impoverishment</td>
<td>9,21*,33*,42</td>
</tr>
<tr>
<td>10</td>
<td>Low Status</td>
<td>10*,22*,34</td>
</tr>
<tr>
<td>11</td>
<td>Strenuous Working Condition</td>
<td>12,24,35,43*</td>
</tr>
<tr>
<td>12</td>
<td>Unprofitability</td>
<td>11,23</td>
</tr>
</tbody>
</table>

False* Keyed items

3.9.1.2 Reliability and Validity of Occupational Stress Index

The reliability index (table – 3.4) ascertained by split half (odd-even) method and cronbach’s alpha – coefficient for the scale as a whole were found to be 0.93 and 0.90 respectively. The reliability indices of the 12 sub-scales were also computed on the split half method. The following table records the obtained indices.

The validity of the O.S.I. was determined by computing coefficient of correlation between the scales on the O.S.I. and the various measures of job attitudes and job behavior. The employee’s scores on the O.S.I. is likely to positively correlates with the scores on the measures of such work-manifest attitudinal and motivational and personality variables, which provide lowering or moderating the level of occupational
stress. The coefficient of correlation between the scores on the O.S.I. and the measures of job involvement, work motivation, ego-strength and job satisfaction were found to be - .56 (N=225), - .44 (N=200), - .40 (N=205) and - .51 (N=500) respectively. The correlation between the scores on the O.S.I. and the measure of job anxiety was found to be 0.59 (N=400).

Table 3.5
Reliability index

<table>
<thead>
<tr>
<th>No</th>
<th>Sub Scales</th>
<th>Reliability Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Role Overload</td>
<td>0.68</td>
</tr>
<tr>
<td>2</td>
<td>Role ambiguity</td>
<td>0.55</td>
</tr>
<tr>
<td>3</td>
<td>Role conflict</td>
<td>0.69</td>
</tr>
<tr>
<td>4</td>
<td>Unreasonable Group &amp; Political Pressure</td>
<td>0.45</td>
</tr>
<tr>
<td>5</td>
<td>Responsibility for persons</td>
<td>0.84</td>
</tr>
<tr>
<td>6</td>
<td>Underparticipation</td>
<td>0.63</td>
</tr>
<tr>
<td>7</td>
<td>Powerlessness</td>
<td>0.80</td>
</tr>
<tr>
<td>8</td>
<td>Poor Peer relations</td>
<td>0.54</td>
</tr>
</tbody>
</table>

3.9.1.2 Translation, Reliability and Validity of Occupational Stress Index

The Occupational Stress Index (O.S.I.) is originally in English was translated by the research supervisor in to Kannada language for Kannada medium teachers. Content validity of the questionnaire was also established with the help of 5 experts who know both English and Kannada (Indian). The subject experts did not suggest any changes or modifications. A pilot study was conducted on a sample of 40 teachers in Mysore city. The reliability of the scale was established with Cronbach Alpha Coefficient method, seems to be satisfactory, that is 0.82.
3.9.2 Maslach Burnout Inventory (MBI)

Job burnout was measured by the *Job Burnout Questionnaire*, developed and standardized by Maslach and Jackson (1981). This is a widely used scale, and it consists of 22 statements that assess the three facets of professional burnout, emotional exhaustion, depersonalization and lack of personal accomplishment. The emotional exhaustion was regarded as the basic individual stress component of the syndrome (Maslach et al., 2001). The respondents identity as to how often they feel professional burnout on a "six-point Likert-type rating scale" ranging from "never" (0) to "every day" (6). This scale has been employed in a considerable number of Greek and international studies that have investigated the professional burnout of a substantial number of occupations, such as civil servants, doctors, and teachers in special and mainstream schools (Kanas, 1996). Iwanicki and Schwab (1981) reported Cronbach alpha internal reliability estimates of 0.90 for emotional exhaustion, 0.76 for depersonalization, and 0.76 for personal accomplishment. The validity of the MBI was substantiated by studies conducted by Iwanicki and Schwab (1981).

3.9.2.1 Scoring of Maslach Burnout Inventory

As the Burnout Inventory Manual (BIM) indicates, higher composite scores on the EE and DP subscales indicate higher levels of “burnout” of each dimension. The cut-offs for the EE and DP subscales as follows: high EE is >30, moderate EE = 18-29; and low EE <17; for high DP, >12, moderate DP 6-11 and low DP <5. The BIM reports the following cut-offs for PA: high PA (denoting low burnout) >30; moderate PA = 34-39; and low PA (denoting high burnout) is <17.
3.9.2.2 Validity and Reliability of Maslach Burnout Inventory

The validity and reliability of the MBI-ES were substantiated in two studies. Both Iwanicki and Schwab (1981) and Gold (1984) found through factor analysis support for the three-factor structure of the MBI-ES. Iwanicki and Schwab (1981) report Cronbach alpha internal reliability estimates of 0.90 for emotional exhaustion, 0.76 for depersonalization, and 0.76 for personal accomplishment. Gold (1984) reports slightly lower estimates of 0.88, 0.74, and 0.72, respectively.
In its original form the MBI-ES, makes reference to "students" on several items. These referents were replaced with "training participants", which is a term more suitable for those who receive training. Internal reliabilities for the burnout subscales with this population were 0.90 for emotional exhaustion, 0.74 for depersonalization and 0.66 for personal accomplishment.

3.9.2.3 Translation, Reliability and validity of Maslach Burnout Inventory

The Maslach Burnout Inventory (MBI) is originally in English was translated by the research supervisor in to Kannada language for Kannada medium teachers. Content validity of the questionnaire was also established with the help of 5 experts who know both English and Kannada (Indian). The subject experts did not suggest any changes or modifications. A pilot study was conducted on a sample of 40 teachers in Mysore city. The reliability of the scale was established with Cronbach Alpha Coefficient method, seems to be satisfactory, that is 0.86.
3.9.3 Ways of Coping Questionnaire

The coping mechanisms measured by the Ways of Coping Questionnaire, developed and standardized by Lazaru and Folkman (1985). This questionnaire consists of 66 items and eight subscales. The subscales are: 1. Confrontive coping, 2. Distancing, 3. Self controlling, 4. Seeking social support, 5. Accepting responsibility, 6. Escape-Avoidance, 7. Planful Problem Solving and 8. Positive Reappraisal. These items have to be responded to, on a "4-point scale" ranging from “not used” to “used to a great deal”.

The items on the original ways of coping checklist were classified on the basis of rater’s judgments about being "problem-focused" or "emotion focused" (Lazarus & Folkman, 1985). "Problem-focused coping" has four scales, namely, Seeking social support, Accepting responsibility, Planful problem solving, and Positive reappraisal. Similarly, "Emotion-focused coping" also has four scales, Confrontive coping, Distancing, Self-controlling, and Escape-avoidances. Alpha reliability ranged from minimum 0.67 to maximum 0.78 for the subscales. The construct validity was confirmed and substantiated by two studies, by Manne and Sandler (1984). They found factor analytic support for eight factor structure of the Ways of Coping Checklist.

The reliability coefficients for the eight coping scales discussed earlier range from 0.68 to 0.79. Alpha coefficients for the aggregate problem and emotion-focused scales are 0.80 and 0.81, respectively.

3.9.3.1 Scoring of the Ways of Coping Questionnaire

To score the questionnaire, the researcher added the raw score for each item on the scale to get a total score. There are four possible responses: 0, 1, 2 and 3. These are also the weights that should be used to get the raw score. Not that all 66 items are scaled.
Table 3.6

No. of Items in each coping strategy

<table>
<thead>
<tr>
<th>No of items</th>
<th>Item in the scale</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>6,7,17,28,34,46</td>
<td>Confrontive coping</td>
</tr>
<tr>
<td>6</td>
<td>12,13,15,21,41,44</td>
<td>Distancing</td>
</tr>
<tr>
<td>7</td>
<td>10,14,35,43,54,62,63</td>
<td>Self controlling</td>
</tr>
<tr>
<td>6</td>
<td>8,18,22,31,42,45</td>
<td>Seeking social support</td>
</tr>
<tr>
<td>4</td>
<td>9,25,29,51</td>
<td>Accepting responsibility</td>
</tr>
<tr>
<td>8</td>
<td>11,16,33,40,47,50,58,59</td>
<td>Escape-Avoidance</td>
</tr>
<tr>
<td>6</td>
<td>1,26,39,48,49,52</td>
<td>Planful Problem Solving</td>
</tr>
<tr>
<td>7</td>
<td>20,23,30,36,38,56,60</td>
<td>Positive Reappraisal</td>
</tr>
</tbody>
</table>

Raw scores describe the coping effort for each of the eight types of coping. High raw scores indicate that the person often used the behaviors described by that scale in coping with the stressful event.

3.9.3.2 Translation, Reliability and Validity of Ways of Coping Questionnaire

The Ways of Coping Questionnaire is originally in English was translated by the research supervisor in to Kannada language for Kannada medium teachers. Content validity of the questionnaire was also established with the help of 5 experts who know both English and Kannada (Indian). The subject experts did not suggest any changes or modifications. A pilot study was conducted on a sample of 40 teachers in Mysore city. The reliability of the scale was established with Cronbach Alpha Coefficient method, seems to be satisfactory, that is 0.93.

3.9.4 Psychological Health Questionnaire

The General Health Questionnaire (GHQ) is a measure of current mental health and since its development by Goldberg in the 1970s it has been extensively used in
different settings and different cultures. The scale asks whether the respondent has experienced a particular symptom or behavior recently. The GHQ screens for non-psychotic psychiatric disorders. This self-administered questionnaire focuses on two major areas: 1) the inability to carry out normal functions and 2) the appearance of new and distressing phenomena. GHQ-28 has 28 items to assess somatic symptoms, anxiety and insomnia, social dysfunction and severe depression. Reliability coefficients have ranged from 0.78 to 0.95 in various studies.

3.9.4.1 Scoring of the Psychological Health Questionnaire

There are different methods to score the GHQ-28. It can be scored from 0 to 3 for each response with a total possible score on the ranging from 0 to 84. Using this method, a total score of 23/24 is the threshold for the presence of distress. Alternatively the questionnaire can be scored with a binary method where *Not at all* and *No more than usual* score 0, and *rather more than usual* and *Much more than usual* score 1. Using this method any score above 4 indicates the presence of distress. In this study the first method was used to score the responses.

3.9.4.2 Translation, Reliability and Validity of Psychological Health Questionnaire

The Psychological Health Questionnaire is originally in English was translated by the research supervisor into Kannada language for Kannada medium teachers. Content validity of the questionnaire was also established with the help of 5 experts who know both English and Kannada (Indian). The subject experts did not suggest any changes or modifications. A pilot study was conducted on a sample of 40 teachers in Mysore city.
The reliability of the scale was established with Cronbach Alpha Coefficient method, seems to be satisfactory, that is 0.89.

3.10 Statistical Techniques used for Analysis of Data

The following statistical techniques were employed in the present investigation:

1. Descriptive statistics like mean and percentage have been employed to analyze the data descriptively.

2. Independent samples ‘t’ test, one way ANOVA, coefficient correlation

Brief descriptions of the above statistical techniques are given below.

3.10.1 Independent Samples t-test

The independent samples t test procedure compares means of two groups of the randomly selected samples by testing the significance of the difference between two independent means. As such, in the present study t-test was applied to find out the difference between independent means of two groups categorized on the basis of gender (male and female) in different variables selected for the study i.e. Occupational Stress, Job Burnout, Coping Mechanisms and Psychological Health.

3.10.2 One Way ANOVA

The ANOVA one way procedure implies a one-way analysis of variance for a quantitative dependent variable by a single independent variable. Analysis of variance is used to test the hypothesis that several means are equal, to compare more than two means.
(three or more) at a time. This technique is an extension of the independent sample t-test. In addition to determining whether the differences among the means are significant or not, it also enables one to know which the means that differ are. In the present study ANOVA (one way) was employed to find out the differences among teachers with different length of experience, different type of school, teachers of different age groups and different type of subjects in different variables selected for the study i.e. Occupational Stress, Job Burnout, Coping Mechanisms and Psychological Health.

3.10.3 Pearson Product-Moment Correlation Coefficient

The correlation coefficient, a concept from statistics, is a measure of how variable or rank order is related. Correlation is a statistical devise for finding out the extent to which the scores of one series of measurements correlate with the scores of other series of measurement. In this study Pearson Product-Moment Correlation Coefficient was used to find out the relationships between Occupational Stress, Job Burnout, Coping Mechanisms and Psychological Health among school teachers. The details of the analysis and findings of the study are presented in the next chapter.

3.11. Summary

Chapter III provided an overview of the proposed research method of the study. In this chapter an attempt has been made to explain the design of the study, locale of the study, research method of the study, which includes the statement of the problem, objectives and hypothesis of the study, variables considered for the study, operational definitions of the key terms and concepts, tools used for data collection, population,
sample, procedure and statistical techniques employed for analysis of the data, and summary.