CHAPTER - III

METHODOLOGY

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3.3. SUMMARY
3.1. INTRODUCTION

This chapter contains the method used for the present research. This will include the hypotheses tested, the description of sample of managers who were included for the study, the tools, and procedures used for data collection and statistical analysis.

3.2. METHOD

The method employed to implement this study includes the description of the hypotheses, the sample of manager, the tools used, the procedure followed to collect the data, and finally the statistics employed to test the hypotheses.

3.2.1. Hypotheses

The following hypotheses were developed in the light of the earlier research, the objectives of the present study, and the review of the related literature:

1. Type A managers have higher stress than type B managers.
2. Type A managers have low job satisfaction than type B managers.
3. Type B managers cope better with stress than do type A.
4. Type B managers' performance is better than type A.
5. Stress, job satisfaction, coping and TABP are good
predictors of job performance.

3.2.2. Sample

200 male managers (middle management level) in the age group of 35 to 45 years from various industries in Nasik city, India, formed the sample. They belonged to 39 large, medium and small scale organizations. The criteria for defining the large, medium and small scale was done on the basis of the investment in plant and machinery. The basic requirement of investment in the large scale was Rs. 1 crore and above. For the medium scale the investment was between Rs. 60 lakhs and Rs. 1 crore and the small scale was defined in terms of investment upto Rs. 60 lakhs. This information was made available by the Maharashtra State Financial Corporation (MSFC).

The managers included for the present study were in their present position for at least two years at the time they were contacted. They belonged to different departments - Finance, Personnel, Marketing, Production, Purchase, Research and Development and Planning. The managers were from various types of industries - electronic, computer, engineering, packaging, chemical, food, rubber, pharmaceutical, paper and automobile.

The distribution of the sample taken for the present study is shown in Table III-1.
Table - III-1

<table>
<thead>
<tr>
<th>Type of industry</th>
<th>No. of managers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large</td>
<td>80</td>
</tr>
<tr>
<td>Medium</td>
<td>80</td>
</tr>
<tr>
<td>Small</td>
<td>40</td>
</tr>
<tr>
<td>Large</td>
<td>200</td>
</tr>
</tbody>
</table>

The distribution of the number of companies included for the present study is shown in Table - III-2.

Table - III-2

<table>
<thead>
<tr>
<th>Type of industry</th>
<th>No. of companies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large</td>
<td>09</td>
</tr>
<tr>
<td>Medium</td>
<td>16</td>
</tr>
<tr>
<td>Small</td>
<td>14</td>
</tr>
<tr>
<td>Large</td>
<td>039</td>
</tr>
</tbody>
</table>
3.2.3. Tools

The following tools were used for the data collection for the study of stress, job satisfaction, coping, TABP and their effect on job performance among managers.

1. The Occupational Stress Indicator (OSI) (Cooper, Sloan and Williams, 1988).

The Occupational Stress Indicator (OSI) has been designed to measure the sources and effects of occupational stress. It measures the responses of the individuals to such situations that might lead to negative results.

The OSI is designed to gather information on groups of individuals in various areas - stress, type A behaviour pattern (TABP), locus of Control, coping, job satisfaction, mental health and physical health.

The OSI is used in work situations especially in industries where it helps the executive or managers to alleviate the effects of stress so that it is a mutual benefit to both the individual and the organization concerned.
There are seven scales in the OSI:

a. Source of stress
b. Type A behaviour pattern
c. Locus of control
d. Coping with stress
e. Job satisfaction.
f. Mental health
g. Physical health.

Seven scales of OSI are described below but only four of these were included in this study:

(a) Sources of pressure (Stress) scale:
Comprises 61 items. These job stressors consist of factors intrinsic to the job, the role of the management, the relationships with others, career and achievement, the structure and climate of the organization and the negative effect of work on the home life and vice versa. Greater scores indicate more stress.

(b) TABP Scale:
Comprises 14 items which identify attitudes toward living, style of behaviour, and ambition. Higher the score more are the type A characteristics found.
(c) Perceived locus of Control Scale:
Includes 12 items which identify the role of organizational forces, management processes, and the individual influence to determine whether there is external or internal locus of control. Higher scores indicate more external locus of control.

(d) Coping with Stress Scale:
Consists of 28 items in areas like social support, task strategies, objective approaches, home-work interface, time management and involvement. In each case, the greater the score, more is the use of those coping strategies.

(e) Job Satisfaction Scale:
Consists of 22 items measuring the subjects' level of satisfaction in his work and job itself, his achievement value and growth, the organizational design structure and processes, and the personal relationship. Greater the score, greater is the degree of job satisfaction.

(f) Mental Health Scale and (g) Physical Health Scale:
Comprise 18 items and 12 items respectively, which measure the cognitive and somatic symptoms of stress. Greater the score, poorer the health (DeMoraes, Swan & Cooper, 1993).
Key to the direction of OSI Scale:

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>OSI Scale</th>
<th>High Score indicates</th>
<th>Theoretically possible range of scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Sources of pressure</td>
<td>High pressure</td>
<td>61 - 366</td>
</tr>
<tr>
<td></td>
<td>(stress)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Type A</td>
<td>High type A</td>
<td>14 - 84</td>
</tr>
<tr>
<td>3</td>
<td>Locus of control</td>
<td>External LOC</td>
<td>12 - 72</td>
</tr>
<tr>
<td>4</td>
<td>Coping</td>
<td>High Coping</td>
<td>28 - 168</td>
</tr>
<tr>
<td></td>
<td>(use of more coping)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>strategies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Job satisfaction</td>
<td>High job satisfaction</td>
<td>22 - 132</td>
</tr>
<tr>
<td>6</td>
<td>Mental health</td>
<td>Mental ill health</td>
<td>18 - 108</td>
</tr>
<tr>
<td>7</td>
<td>Physical health</td>
<td>Physical ill health</td>
<td>12 - 72</td>
</tr>
</tbody>
</table>

(After Robertson, Cooper & Williams, 1990)

The response alternatives to the OSI scale range from "very poor" being scored 1 to "very well" being scored 6.
The reliability of the OSI scale was estimated by the Cronbach's (1951) alpha-coefficient method. The reported coefficients are: sources of pressure (stress) 0.88, type A behaviour pattern 0.58, locus of control 0.38, job satisfaction 0.85, mental health 0.88 physical health 0.78 (Robertson, Cooper & Williams, 1990) and coping 0.79 (Kahn & Cooper, 1991).

The OSI has reported acceptable validity (Cooper & Bramwell, 1992; Cunha et al., 1992; Kahn & Cooper, 1991; Rees & Cooper, 1991; Robertson, Cooper, & Williams, 1990).

Only four of the scales from OSI were included in this study

(a) Sources of Pressure (stress) (61 items)
(b) Job satisfaction (22 items)
(c) Coping (28 items) and
(d) Type A Behavior Pattern (TABP) (14 items).

(APPENDIX A).


The Performance Rating Scale with fourteen items was developed in Hindi and English languages. It is a five-point rating scale ranging from "very poor" being scored 1 to "very well" being scored 5 (Pestonjee & Singh, 1978).

The reliability of the scale was estimated by Cronbach's (1951) alpha - coefficient method and found to be .99. The split-half method also indicated .92 thus recording a satisfactory
level of reliability (Pestonjee & Singh, 1978).

The validity of the scale was done by computing the point-biserial correlation (rpb). The actual performance was considered for the validation of Performance Rating scale. A sample of 200 blue-collar workers were taken to compute the coefficient of correlation between the actual performance and the scores of Performance Rating scale. The correlation coefficient was found to be .84. (Pestonjee & Singh, 1978).

The rating score ranges from 14 to 70, the lower score indicating a low level of performance and the higher score indicating a high level of performance (Pestonjee & Singh, 1978).

The classification of high moderate and low was done on the basis of $Q_1$ and $Q_3$ points. Those individuals who scored below $\frac{1}{3} Q_1$ were placed in the lower level of performance whereas those having above $Q_3$ scores were placed at the higher level of performance. Those scoring between $Q_1$ and $Q_3$ were placed in the moderate performance group (Pestonjee & Singh, 1978).

This scale is used to rate performance of an employee by his superior. For the purpose of this study the scale was used in two ways: self-rating by the manager, and manager's rating by his boss. Therefore, two scores were obtained for each manager regarding his performance. For convenience the former has been
termed Performance Rating (self) and the latter, performance rating (superior).

3.2.4. Procedure

The OSI and the Performance Rating Scale were given individually to 200 managers at their workplace and the same were collected after a few days.

The Performance Rating Scale (superior) was given to each manager's immediate superior who rated the subordinate's performance and returned them to the investigator immediately.

3.2.5. Statistical Analysis

The main statistical techniques employed in the present study were:
(a) t-test
(b) Multiple regression analysis.

t-test was applied to find the differences between type A managers and type B managers on stress, job satisfaction, coping and performance from large, medium, small and all the three combined group of industries. The multiple regression analysis was used to test the variance of four variables - stress, job satisfaction, coping and TABP - in the outcome variable, job performance (self-rated).
3.3. SUMMARY

This chapter has given a full account of methodology used in the present research.

The aim of the study was to identify the stress, job satisfaction and coping among type A and type B managers and their effects on performance. The hypotheses were regarding the differences in the variables among the large, medium, small industries and all combined group of managers regarding the two types of managers.

Two tools were taken for the data collection. They were: The Occupational Stress Indicator (OSI) (Cooper, Sloan & Williams, 1988; and Performance Rating Scale (Pestonjee & Singh, 1978).

The sample in the study comprised 200 male managers (middle management level) from various industries of different sizes. The statistics used in the research for the analysis of the data included t-test and multiple regression.