CHAPTER – III

RESEARCH METHODOLOGY
Work plays a central role in the lives of many people, and thus the impact of occupational stress is an important issue both for individual employees and the organizations in which they work. In order to investigate on the job stress of IT professionals, a systematic approach is required with a strong base of previous studies conducted by various researchers. The previous chapter has highlighted various important studies in the area of stress management across various professions and professionals.

Despite a number of models developed to explain the stress, its impact and coping strategies by various researchers, still remains a fairly new area in research, leaving room for the development of frameworks and models to better describe them.

The research methodology of the present study is presented in this chapter, covering the research questions, objectives, and hypotheses, data sources and instrument, sampling design, data analysis tools and organization of the thesis.
3.1 STATEMENT OF THE PROBLEM

The word Stress, used loosely today in society, has many connotations and can imply a range of circumstances from ordinary workplace dissonance to serious mental disturbance. Crucially, what starts off as a minimal disturbance in one’s sphere of activity can have significant ramifications that affect many life spheres if left unattended.

The study throws light on the widespread silent problem by name ‘Stress’, which gave rise to acute dysfunctions and are called diseases as per medical terminology, especially the heart-related diseases, if left uncared the extremity of stress may turn a person vulnerable and even lead to the suicide of the person.

The work stress is found in all the professions, and it’s the fact that every job has its own complexity and at times the job profile itself may be stressful, the very affected are the IT professionals who are highly target-driven, highly pressured on results, and are squeezed both physically and mentally to the maximum on their roles and loads.

The stress is manifested in various ways and means, and the much-prone sector is the IT sector, which has turned upside down only their working hours but also their biological system, which affects at three different levels viz., Individual, Interpersonal and Organizational level. It becomes the vital role of the management to take care of the employees’ health rather providing only the monetary benefits, which is not so in practice to the fullest.

The workplace must be welcoming and should be an avenue to exhibit employee potentials to the fullest with interest. In reality, it not so, because of the stress that one faces in the working environment due to various factors, like Organizational Role, the change in Culture and Climate, intrinsic job factors and routine hassles at work, workplace relationships and environment.
India should develop and strive for wealth, but not at the cost of its health. The stress is that which gradually penetrates one’s health and destroys it very badly if left unnoticed. Stress is the important concept that underlies cardiac disorders and appears to predict coronary crisis, resulting in younger Heart Patients in India. The world heart federation revealed that 10% of the death happens due to stroke, and 13% of the death happens due to Coronary heart disease, for which the prime reason is the Stress factor.

It is becoming evident that Indian is not only the IT (Information Technology) Hub which has skewed the dietary and life style habits of the youngsters who enter the field and also becoming the HP (Heart Patients) Hub as the consequential fact.

Hence, the problem of stress at work place is the key issue to be addressed immediately in IT sector which is at alarming stage so that the prime stressors are identified and action plans are suggested in order to minimize the stress levels and make the work place free from stress.

3.2 SIGNIFICANCE OF THE STUDY

In order to avoid job burnout, it’s important to reduce and manage stress at work. Start by identifying what factors are involved. Then one can take steps to deal with the problem, either by changing the work environment or changing the way of dealing with the stressors.

The inevitable phenomenon of stress is widespread in all most all working professionals and very high especially for IT (Information Technology) professionals. The IT companies are wide spread in many places, but the notable are there in the metros and other cities. The employees are stressed because of their high pressure work load, continuous targets, short deadlines, night shifts, lack of role clarity, pressure from clients, etc. As a result of this stress which is unknown for them in many cases, the consequences that they
face and the cost for this stress is very high in nature, they are affected both physically and psychologically.

The study aims in analysing how the IT professionals are prone to Stress, the impact of stress on job satisfaction and how they cope with the stress faced.

3.3 RESEARCH DESIGN

Research design outlines the procedures for obtaining the information needed to structure or solve research problems. It gives a framework or blueprint for the study, suggesting the type of data to get or observations to make, how to analyse them, and the possible conclusions that can be drawn from the analysis. Leedy (1997) asserts that the research method used should be chosen with cognizance of the data which will be gathered to solve the research problem:

“The data dictate the research methodology”.

Research in this area is descriptive providing the inventory of feelings of the IT professionals regarding organizational stressors, individual assessed stress levels and coping strategies. It has broadly four strands; one analysing the organizational stressors, second examining the occupational stress level, third measuring the job satisfaction level and last one studying the coping strategies adopted by the IT professionals in India.

The paradigms of various most cited studies such as Spector (1989), Parek (1983) and Krishna et al. (1992) et al. provide basic framework for the research design of the present study. The present study adapted previously validated scales for examining the stressors, stress levels, job satisfaction and coping strategies. Further, demographic variables such as gender, age, experience, marital status and educational qualifications were considered as the independent variables.
Continuing the legacy of earlier research works, the research design of the present study considered organizational stressors, self-assessed stress levels, job satisfaction, intention to quit and coping strategies as key areas of research to make more comprehensive study in the area of stress management that has been identified as a gap in the research studies reviewed.

3.4 RESEARCH OBJECTIVES

Having discussed the research design, the objective of the present study is to conduct an in-depth and comprehensive study on effect of stress in IT sector in India. The present study was designed to analyze the various factors influencing occupational stress, job satisfaction and coping strategies of the information technology professionals in India, with following specific objectives:-

1. To identify the sources or causes of occupational stress in the IT industry.
2. To measure the level of occupational stress among the IT professionals.
3. To test the effect of occupational stress on job satisfaction and intention to quit.
4. To evaluate the coping strategies followed by the IT professionals to reduce their stress levels.
5. To suggest suitable measures for reducing occupational stress to the IT companies.

3.5 THEORETICAL FRAMEWORK OF THE STUDY

In this section a theoretical framework for the occupational stress is developed based on the objectives and previous literature survey. The model can be developed consistent with previous theory that estimates the effects of several dimensions on occupational stress.
The IT sector of India – the sunshine industry, has brought a new work environment and sea changes in the employment trends. Service providers characterized this sector by adhering to strict deadlines set by their customers, working in different time zones, interdependency in teams, multitasking, increased interaction with offshore clients and extended work hours. The customer expectation in terms of skills required for processing jobs keeps changing and forces professionals to upgrade/adapt very fast to their demands. At times IT professionals are forced to change the entire paradigms amidst constant uncertainty and high risk. These working conditions lead to high stress in the professionals (Ivancevich et.al., 1985). Organizations have started recognising high stress as a worthy area to address growing attrition rate prevalent in this sector. The research attempts to study the stress faced by IT professionals.

The present study has collected relevant demographic data from the respondents such as gender, age, income, educational qualifications, marital status, working hours, family size and spouse occupation to examine the stress and its effects on professionals in IT industry.

3.5.1 Factors of Job Stress

Software job is stressful job. It is difficult to say what factors contribute to this stress, because job stress may be caused by a complex set of reasons. The software development process is quite complex, from understanding of clients’ requirement to the maintenance phases, acquiring and updating different sets of knowledge and skills (Sailaja et al., 2013). Some of the most visible factors of job stress are work stressors, role stressors, personal development stressors, interpersonal relation stressors and organizational climate stressors (Sailaja et al., 2013).
A well developed and widely used Occupational Role Stress scale (ORS) in the Indian context developed by Pareek (1993) was chosen to assess the occupational stress of the sample. The ten factors of stress scale that were considered in the present study are as follows:

(i) **Inter role distance (IRD)** arises when the role occupant finds it difficult to balance between the organizational and non organizational roles.

(ii) **Role stagnation (RS)** results from inability to take over a new role; the role occupant keeps on stagnating in the old role due to lack of competence for the new role.

(iii) **Role expectation conflict (REC)** arises when the role occupant encounters conflicting expectations from his/her role.

(iv) **Role erosion (RE)** results when some of the important functions belonging to one’s role are performed by other roles.

(v) **Role overload (RO)** arises when there are too many or too high expectations from one’s role.

(vi) **Role isolation (RI)** results when the role occupant experiences lack of interaction/communication with the connected roles.

(vii) **Personal inadequacy (PI)** arises when the role occupant does not have the competence for performing in his/her role.

(viii) **Self-role distance (SRD)** results when the role occupant experiences a conflict between the self and his/her role; the role demands what the role occupant does not like to do.

(ix) **Role ambiguity (RA)** arises when the role occupant is not clear about expectations from his/her role.
(x)  **Resource inadequacy (RIn)** results when the role occupant encounters inadequacy of resources for performing in his/her role.

The ORS scale comprises 50 items/statements. For each role stressor, there are five items/statements. Respondents are required to rate each item/statement from one to five (one denotes the least likely situation and five signifies the most likely situation). Respondent’s score for each role stressor is obtained by adding the scores for the given five items/statements (e.g., items 1, 11, 21, 31, 41 for inter role distance). The score for total role stress for a respondent is obtained by adding his/her scores for the ten role stressors.

### 3.5.2 Job Satisfaction

There are a number of factors, which can affect the job satisfaction. These factors include income, appreciation, relationship with boss, the number of working hours, rest time, work atmosphere and type of work.

In this research, job satisfaction was measured based on the Job Satisfaction Survey (JSS) designed by Paul E. Spector, University of South Florida (1985). This kind of measurement is to measure job satisfaction from human service employee. Overall, JSS present evidence for the scale's reliability and construct validity specific applicability to human services. JSS use a five-point Likert-point scale ranging from very dissatisfied (1) to very satisfied (5). The factors that are considered in JSS and the scale statements were illustrated in the *appendix B*.

Based on this job satisfaction survey, the present study has framed 16 statements that found to be relevant for the present study.
3.5.3 Coping Strategies

Coping may be defined as cognitive and behavioural effort made to master, tolerate or reduce demands that tax or exceed a person’s resources (Cohen and Lazarus, 1979). The coping strategies can refer to cognitive, affective or behavioural strategies towards overcoming the stress (Lazarus, 1999).

Coping check list (CCL) developed by Rao, Subbakrishna and Prabu (1999) was used in the present study. The scale has 70 items describing a broad range of behavior, emotional and cognitive responses used to handle stress. Each item is responded to with a “Yes” or a “No”. It is applicable to both sexes. The author has indicated that individual items represent three major “dimension” of coping which have been categorized into other sub-dimensions. The three dimensions are problem-focused coping, emotion-focused coping and problem and emotion focused coping, which is further sub divided into problem focused scale – problem solving, emotion focused scale (distraction positive methods, distraction negative method, acceptance/redefinition. Religion/faith and denial/blame) and social support – which is the combination of both problem and emotion focused coping. The score of each subscale is therefore, the sum total of the responses on the scale. The scores indicate that higher the score better the coping and vice versa.

Table 3.1 portrays the sub scales and its statement number in a detailed manner. The list of statements was directly used in the questionnaire that can be referred for complete scale.
Table 3.1   Coping Strategies Sub Scales

<table>
<thead>
<tr>
<th>Coping Strategies</th>
<th>Sub scales</th>
<th>No. of Scale Items</th>
<th>Statement No’s</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem focused</td>
<td>Problem solving</td>
<td>10</td>
<td>1, 12, 30, 44, 52, 53, 54, 55, 56 &amp; 70</td>
</tr>
<tr>
<td></td>
<td>Distraction – Positive</td>
<td>14</td>
<td>4, 10, 11, 22, 29, 37, 40, 45, 48, 50, 57, 59, 63 &amp; 64</td>
</tr>
<tr>
<td></td>
<td>Distraction – Negative</td>
<td>9</td>
<td>8, 14, 17, 24, 34, 36, 58, 60 &amp; 69</td>
</tr>
<tr>
<td></td>
<td>Acceptance/ Redefinition</td>
<td>11</td>
<td>2, 5, 13, 16, 18, 20, 28, 41, 43, 47 &amp; 61</td>
</tr>
<tr>
<td></td>
<td>Religion/Faith</td>
<td>9</td>
<td>9, 12, 25, 27, 33, 36, 39, 62 &amp; 66</td>
</tr>
<tr>
<td></td>
<td>Denial / Blame</td>
<td>11</td>
<td>6, 19, 23, 31, 32, 35, 38, 49, 51, 67 &amp; 68</td>
</tr>
<tr>
<td>Problem &amp; Emotion focused</td>
<td>Social Support</td>
<td>6</td>
<td>3, 7, 15, 26, 42 &amp; 65</td>
</tr>
</tbody>
</table>


3.6 RESEARCH HYPOTHESES

The current research model has four parts: (1) Demographic Variables (2) organizational stressors and occupational stress level (3) Job Satisfaction and Intention to quit and (4) Coping strategies. The first seven hypotheses are formulated regarding the relationship between demographic variables and individual stress levels. The next five hypotheses are framed to examine the relationship between organisational stressors, occupational stress, job satisfaction and intention to quit.

The next seven hypotheses of the present study are formulated regarding the relationship between demographic variables and coping strategies. The last hypothesis is investigating the influence of occupational stress level and the coping strategies adopted by IT professionals.
Based on the extensive literature review, the following hypotheses are formulated and are shown in figure 3.1.

H01: There is no significant difference in the occupational stress among software professionals according to Gender

H02: There are no significant differences in the occupational stress among software professionals according to their age group

H03: There are no significant differences in the occupational stress among software professionals according to educational qualifications

H04: There are no significant differences in the occupational stress among software professionals according to their marital status

H05: There are no significant differences in the occupational stress among software professionals according to their work experience

H06: There are no significant differences in the occupational stress among software professionals according to their income level

H07: There are no significant differences in the occupational stress among software professionals according to the working hours

H08: There are no significant relationship between organizational stressors and occupational stress levels

H09: Each job stressor is not significantly related to respondents’ job satisfaction.

H010: Each job stressor is not significantly related to respondents’ intention to quit

H011: There is no significant relationship between occupational stress and job satisfaction

H012: There is no significant relationship between occupational stress and Intention to quit

H013: There is no significant difference in the stress coping strategies among software professionals according to the Gender
Figure 3.1: Hypothetical Model of the Study

- **Organizational Stressors**
  - Inter role distance
  - Role Stagnation
  - Role Expectation Conflict
  - Role Erosion
  - Role Overload
  - Role Isolation
  - Personal Inadequacy
  - Self-role Distance
  - Role Ambiguity
  - Resource Inadequacy

- **Coping Strategies**
  - Problem Focused
    - Problem Solving
  - Emotion Focused
    - Distraction (positive)
    - Distraction (negative)
    - Acceptance / Redefinition
    - Religion / faith
    - Denial / blame
  - Problem & Emotion Focused
    - Social Support

- **H8**
- **H9, H10**
- **H11**
- **H12**
- **H1** to **H7**
- **H13 to H19**

**Gender** | **Age** | **Education** | **Marital Status** | **Experience** | **Income** | **Working Hours**
H₀14: There are no significant differences in the stress coping strategies among software professionals according to their age group

H₀15: There are no significant differences in the stress coping strategies among software professionals according to their educational qualifications

H₀16: There are no significant differences in the stress coping strategies among software professionals according to their marital status

H₀17: There are no significant differences in the stress coping strategies among software professionals according to their work experience

H₀18: There are no significant differences in the stress coping strategies among software professionals according to their Income

H₀19: There are no significant differences in the stress coping strategies among software professionals according to the working hours

H₀20: There are no significant relationship between occupational stress and coping strategies among software professionals

3.7 SAMPLING DECISIONS

Restrictions of time, money and access make it impossible to survey every member of the population. A sampling technique should therefore be used to allow for the collection of data from a subgroup from which generalizations about the total population can be made.

Sampling is one of the most critical problems confronted with in this study. As the present study is confined to a sampling frame of IT professionals in India, Organizations involved in computer programming-related work in the computer and computer-peripheral hardware and software segments were considered as the population of the study.

The present study considered top seven IT companies according to the estimate by the National Association of Software and Services Companies (NASSCOM, 2013). The sample covers the IT companies such as Tata Consultancy Services
Ltd., Infosys Ltd., Wipro Ltd., HCL Technologies Ltd., Tech Mahindra Ltd., iGate and Mphasis. A convenience sample of 700 IT professionals are used in the present study, because it is the best sampling method while dealing with large sample sizes and infinite population. In addition, most of the earlier research studies also adopted the convenience sampling method.

Since, IT professionals are dispersed over wide geographical area; the sample is taken from the prominent IT hubs in India such as Bangalore, Hyderabad, Chennai, Pune and Mumbai cities where a large number of IT companies are located and software professionals are employed. Software Professionals who have been full time employees with at least 6 months of work experience in the selected IT companies were taken as sample.

A total of 700 questionnaires (100 questionnaires to each IT company) were distributed physically, through web links and emails to professionals employed in the selected software companies operating in different city locations in India. The selected companies HR managers / executives were approached on this purpose seeking support in conducting the survey. The sample was drawn from both men and women software professionals holding positions ranging from trainees or fresher’s to middle management. Repeated follow ups resulted in collecting a total of 498 filled-in questionnaires, out of which 8 questionnaires were half-filled and 6 other questionnaires were found having inconsistency in the responses. Both half-filled and inconsistent questionnaires were removed from the sample, leaving finally 482 valid, usable questionnaires.

3.8 DATA COLLECTION

Collis and Hussy (2003) identify questionnaires, interviews and rating scale checklists as techniques for gathering survey data. A questionnaire is one of the most widely used data collection methods. It provides an effective way of collecting responses form a large number of respondents beyond the physical
reach of the researcher prior to a quantitative analysis. Interview allow for probing to obtain additional, clarifying information, but can be expensive if the respondents are geographically spread out. In this study a questionnaire was used because of its relatively low cost and ease of administration for collecting the data from the target population. The survey was conducted during January to September’ 2013.

**Pilot Testing**

Collis and Hussy (2003) stress that a questionnaire must be pilot tested to refine it and eliminate potential difficulties in completing and analyzing it. Furthermore, the pilot study respondents should be similar to the members of the research population.

Though the questionnaire was developed with the help of widely used and accepted scales, the researcher again has conducted a pilot study, for which the standardized questionnaires were supplied to 50 IT professionals and this was tested for reliability using Cronbach alpha analysis. The reliability analysis displayed fair amount of consistency in the scale items used in the questionnaire. The questionnaire was further modified with the help of pilot study respondents and software employees. The modifications include presenting the questionnaire in table form to reduce the respondents’ time to fill the questionnaire and using simple English that is easily understandable for the IT professionals.

**Procedure**

An electronic version of the questionnaire was created in the website ‘kwiksurveys.com’ and invitations were sent to company’s HR executives to make their employees participate in the survey in less time and conveniently. The Internet for survey was used because it is interactive and provides ample scope to check and edit inappropriate responses; other advantages, such as
speed of delivery, faster response, large sample at a very low cost in terms of time and money. Simultaneously, questionnaires were distributed in software companies namely TCS, Infosys, Wipro, Yahoo, Capgemini and Cognizant. Repeated follow ups yielded 498 returned, filled-in questionnaires. By leaving half-filled and inconsistently answered questionnaires, 482 valid and usable questionnaires were collected finally.

**Reliability Analysis**

When the scales are used in the study, their reliability needs to be tested. Reliability testing is concerned with the scale’s internal consistency, which refers to the degree to which the items that makeup the scale ‘hang together’ (Pallant, 2007). One of the most commonly used internal consistency indicators is Cronbach’s alpha coefficient. Ideally, the Cronbach alpha coefficients should be above 0.6 (Briggs and Cheek, 1986).

A reliability test using SPSS 20.0 was conducted to examine the internal dependability of the constructs based on the responses recorded in pilot study. **Table 3.2** depicts the Cronbach’s alpha of the constructs varies from 0.6 to 0.8 which suggest the reliability of the studies constructs. From the table, it is noted that all the values of Cronbach’s alpha is above 0.6, which show an acceptable consistency in the scales used in the present study.
### Table 3.2  
Reliability Analysis for Pilot study

<table>
<thead>
<tr>
<th>Scales and Sub scales - Factors</th>
<th>No. of Items</th>
<th>Cronbach’s alpha Score</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Organizational Stressors</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Inter role distance (IRD)</td>
<td>5</td>
<td>0.776</td>
</tr>
<tr>
<td>2. Role stagnation (RS)</td>
<td>5</td>
<td>0.657</td>
</tr>
<tr>
<td>3. Role expectation conflict (REC)</td>
<td>5</td>
<td>0.784</td>
</tr>
<tr>
<td>4. Role erosion (RE)</td>
<td>5</td>
<td>0.665</td>
</tr>
<tr>
<td>5. Role overload (RO)</td>
<td>5</td>
<td>0.703</td>
</tr>
<tr>
<td>6. Role isolation (RI)</td>
<td>5</td>
<td>0.719</td>
</tr>
<tr>
<td>7. Personal inadequacy (PI)</td>
<td>5</td>
<td>0.698</td>
</tr>
<tr>
<td>8. Self-role distance (SRD)</td>
<td>5</td>
<td>0.804</td>
</tr>
<tr>
<td>9. Role ambiguity (RA)</td>
<td>5</td>
<td>0.820</td>
</tr>
<tr>
<td>10. Resource inadequacy (RIn)</td>
<td>5</td>
<td>0.803</td>
</tr>
<tr>
<td><strong>Self-Assessed Occupational Stress Level</strong></td>
<td>43</td>
<td>0.874</td>
</tr>
<tr>
<td>1. Self-Assessment</td>
<td>18</td>
<td>0.862</td>
</tr>
<tr>
<td>2. Self-Related Behaviour</td>
<td>8</td>
<td>0.678</td>
</tr>
<tr>
<td>3. Stress &amp; Habitual Changes</td>
<td>5</td>
<td>0.692</td>
</tr>
<tr>
<td>4. Routine Hassles at Work</td>
<td>12</td>
<td>0.734</td>
</tr>
<tr>
<td><strong>Job Satisfaction</strong></td>
<td>16</td>
<td>0.802</td>
</tr>
<tr>
<td><strong>Intention to Quit</strong></td>
<td>3</td>
<td>0.738</td>
</tr>
<tr>
<td><strong>Coping Strategies</strong></td>
<td>70</td>
<td>0.918</td>
</tr>
<tr>
<td>1. Problem Focused Problem solving</td>
<td>10</td>
<td>0.679</td>
</tr>
<tr>
<td>2. Emotion Focused Distraction – Positive</td>
<td>14</td>
<td>0.723</td>
</tr>
<tr>
<td>Distraction – Negative</td>
<td>9</td>
<td>0.773</td>
</tr>
<tr>
<td>Acceptance/Redefinition</td>
<td>11</td>
<td>0.661</td>
</tr>
<tr>
<td>Religion/Faith</td>
<td>9</td>
<td>0.744</td>
</tr>
<tr>
<td>Denial / Blame</td>
<td>11</td>
<td>0.835</td>
</tr>
<tr>
<td>3. Problem &amp; Emotion Social Support</td>
<td>6</td>
<td>0.630</td>
</tr>
</tbody>
</table>

*Source: Pilot Study*
Questionnaire

Collis & Hussy (2003) stress that the validity and reliability of the data collected and the response rate achieved largely depend on the design of the questions, the structure of the questionnaire and the effectiveness of the pilot testing. The choice of individual questions is determined by the data needed and can be developed by the researcher, or adapted or adopted from other questionnaires. In designing the questionnaire for this study, validated scales were used for organizational stressors, job satisfaction and coping strategies. The self-assessed occupational stress levels and intention to quit were designed by the researcher by reviewing various articles in the domain of stress management.

IT professionals normally have limited time. It was therefore decided to use closed questions for most of the questions as this type of question is quicker and easier to complete. They are also easier to process in the data analysis stage of the research study. Further, scales are often used to collect data.

Collis & Hussy (2003) made a caution that the length of the survey will affect the response rate. They suggest that the optimal length of a self-administered questionnaire is six to eight A4 pages. The questionnaire used in this study is nine pages long, but due care was taken while distributing the questionnaire personally. While in web survey, the length of the questionnaire was not visible because of the scrolling option and moreover it is designed in four web pages only.

Questionnaire is one of the most commonly used research tools in management research and is highly useful when data are collected from a representative sample of a larger population. In the questionnaire 5-point Likert scales are used to a maximum extent as they offer advantages of speed, ease of coding for SPSS and administration. The questions framed are presented in five sections of the questionnaire.
Section I was designed to collect the demographic and general characteristics of the respondents (gender, age, work experience, marital status, income and working hours).

Section II was designed to collect the perceptions or feelings of the respondents towards various stressors based on the Organizational Role Stress (ORS) scale developed by Dr. Udai Pareekh (1993). ORS scale was used with five-point scale with anchors: 1 – If you never or rarely feel this way, 2 – If you occasionally feel this way, 3 – If you sometimes feel this way, 4 – If you frequently feel this way, 5 – If you very frequently feel this way. ORS scale measures the role stress experienced by an individual in a work situation on the ten dimensions such as Inter-role distance (IRD), Role stagnation (RS), Role expectation conflicts (REC), Role erosion (RE), Role overload (RO), Role isolation (RI), Personal inadequacy (PI), Self-role distance (SRD), Role ambiguity (RA) and Resource inadequacy (RI).

Section III To measure the stress levels of the IT professionals, scales related to self-assessed occupational stress levels were used such as self-analysis, stress related behavior, habitual changes and routine hassles at work. The job satisfaction and intention to quit were also included in the questionnaire by using eighteen items and three items respectively. Job satisfaction was measured based on the Job Satisfaction Survey (JSS) designed by Paul E. Spector, University of South Florida (1985). A 50 itemed original scale was reduced to 16 itemed scale according to the relevance without sacrificing much of the variables.
Section IV The last section in the questionnaire consist of coping strategies questions. A 70 item scale was included to check the coping strategies adopted by the respondents which covers emotion focused, problem focused and social support strategies as developed by Kiran Roa, Subba Krishna and Prabhu (1989). The original scale has used only two options ‘Yes’ or ‘No’, whereas that has been changed to five point scale in the present study with anchors 1 - Never (if the method of coping was never used at all), 2 – Seldom (if used 25% of the time), 3 – Sometimes (if used 50% of the time), 4 – Often (if used 75% of the time) and 5 – Always (if used 100% of the time) The response categories were modified to include frequency of coping behaviours rated on a five points scale.

3.9 LIMITATIONS OF THE STUDY

Any study based on the consumer survey through a predesigned questionnaire suffers from the basic limitation of the possibility of difference between what is recorded and what is truth, no matter how carefully the questionnaire has been designed and field study has been conducted.

- Non-Probabilistic (Convenience) Sample was used in conducting the survey covering various prominent IT hubs in India. The sample size taken may be inadequate to throw accurate figure on the stress levels and its impact in IT industry.

- Evaluation is based on the primary data gathered through questionnaire and accuracy of the findings entirely depends on the accuracy of the responses given by the customers.

- The respondents were sometimes reluctant to answer the question and the response may be biased.
The study is purely based on the respondent opinions. This always raises a doubt on respondent bias in giving the responses that limits the validity of the study. Further, respondents’ opinion may change from time to time and the responses are also subject to variation depending upon the situation and attitude of the respondents at the time of the survey.

Individuals’ stress susceptibility varies over time. The environment can also vary its conditions. Since stress is a complex and dynamic process presented in different areas of life, this research focuses only on the stress at work place due to occupational stress. In this study an attempt to identify basic stress management strategies is applied to IT industry professionals in a work situation.

Lastly, in this research, the researcher has mainly focused on occupational stress, coping strategies and the level of job satisfaction of the employees in the study unit. The impact of stress on work related behaviour of employees, such as absenteeism, loss of judgment, employee conflicts and work place accidents is not analyzed in this study. It is directed for future research.

**Restricted to Job Stress:**

There are many variables which are related to job stress. Every individual responds differently to the stress they face depending on their personality characteristics, their unique experience in the workplace and their coping strategies. Stress is an interactive process which involves these factors. In this research, the researcher merely focuses on work related stress and its relationship with selected individual characteristics. The extraneous stressors beyond the job stress are not discussed.
Stress Intervention Programs:

One important aspect of stress management is intervention programs conducted by the organizations designed to make their employees overcome the feelings of stress. A better understanding of this area is highly relevant to practitioners in the field of stress management and to the managers who are involved in making decisions about how best to tackle negative outcomes of stress in an organization. However, the present research has mainly focused on understanding the stressors in work environment, employee stress levels and coping strategies they follow in general. The present study has not focused on the intervention or employee assistance programs and its effects in IT industry.

Stress Volatility:

Another limitation which would affect the results is stress levels may not necessarily remain constant. The software professionals may feel less stressful when things are going well, but the scores may differ when things are going badly.

3.10 TOOLS OF DATA ANALYSIS

In this research, all the survey responses were coded into Microsoft Excel 2010 spreadsheet, verifying for missing data and inconsistently filled-in questionnaires. The data coded were transferred to SPSS 17 under its relevant defined variables, while creating the data file for analysis. The data analysis for the present study was undertaken in three phases. In the first phase, data collected using scaling techniques were analysed employing reliability analysis (Pilot study). In the second phase, all sorts of descriptive statistics of the responses were calculated. In the final phase testing the hypotheses was done, using statistical tests.
<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Dependent Variable</th>
<th>Independent Variable</th>
<th>Statistical Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>H₀1</td>
<td>Occupational Stress Level</td>
<td>Gender</td>
<td>Z test</td>
</tr>
<tr>
<td>H₀2</td>
<td>Occupational Stress Level</td>
<td>Age</td>
<td>Analysis of Variance (ANOVA)</td>
</tr>
<tr>
<td>H₀3</td>
<td>Occupational Stress Level</td>
<td>Education</td>
<td>Analysis of Variance (ANOVA)</td>
</tr>
<tr>
<td>H₀4</td>
<td>Occupational Stress Level</td>
<td>Marital Status</td>
<td>Analysis of Variance (ANOVA)</td>
</tr>
<tr>
<td>H₀5</td>
<td>Occupational Stress Level</td>
<td>Work Experience</td>
<td>Analysis of Variance (ANOVA)</td>
</tr>
<tr>
<td>H₀6</td>
<td>Occupational Stress Level</td>
<td>Income Level</td>
<td>Analysis of Variance (ANOVA)</td>
</tr>
<tr>
<td>H₀7</td>
<td>Occupational Stress Level</td>
<td>Working Hours</td>
<td>Analysis of Variance (ANOVA)</td>
</tr>
<tr>
<td>H₀8</td>
<td>Occupational Stress Level</td>
<td>Org. Stressors</td>
<td>Linear Regression</td>
</tr>
<tr>
<td>H₀9</td>
<td>Job Satisfaction</td>
<td>Org. Stressors</td>
<td>Linear Regression</td>
</tr>
<tr>
<td>H₀10</td>
<td>Intention to Quit</td>
<td>Org. Stressors</td>
<td>Linear Regression</td>
</tr>
<tr>
<td>H₀11</td>
<td>Job Satisfaction</td>
<td>Occupational Stress Level</td>
<td>Linear Regression</td>
</tr>
<tr>
<td>H₀12</td>
<td>Intention to Quit</td>
<td>Occupational Stress Level</td>
<td>Linear Regression</td>
</tr>
<tr>
<td>H₀13</td>
<td>Coping Strategies</td>
<td>Gender</td>
<td>Z test</td>
</tr>
<tr>
<td>H₀14</td>
<td>Coping Strategies</td>
<td>Age</td>
<td>Analysis of Variance (ANOVA)</td>
</tr>
<tr>
<td>H₀15</td>
<td>Coping Strategies</td>
<td>Education</td>
<td>Analysis of Variance (ANOVA)</td>
</tr>
<tr>
<td>H₀16</td>
<td>Coping Strategies</td>
<td>Marital Status</td>
<td>Analysis of Variance (ANOVA)</td>
</tr>
<tr>
<td>H₀17</td>
<td>Coping Strategies</td>
<td>Work Experience</td>
<td>Analysis of Variance (ANOVA)</td>
</tr>
<tr>
<td>H₀18</td>
<td>Coping Strategies</td>
<td>Income Level</td>
<td>Analysis of Variance (ANOVA)</td>
</tr>
<tr>
<td>H₀19</td>
<td>Coping Strategies</td>
<td>Working Hours</td>
<td>Analysis of Variance (ANOVA)</td>
</tr>
<tr>
<td>H₀20</td>
<td>Coping Strategies</td>
<td>Occupational Stress Level</td>
<td>Pearson Correlation</td>
</tr>
</tbody>
</table>
(i) **Reliability Testing**
Reliability is the trustworthiness of an instrument used for data collection. In this study, consistency of scales used in questionnaire initially in pilot study and also the final responses collected is tested by using Cronbach’s alpha scores.

(ii) **Descriptive Statistic Analysis**
The basic characteristics of the subjects were analysed using mean, percentages, standard deviations, etc.

(iii) **Statistical Tools for Testing Hypotheses**
Testing of hypotheses was conducted using statistical tools such as z test, ANOVA, Pearson correlation and linear regression. The statistical tests applied to each hypothesis, dependent and independent variables were summarized in table 3.3.

3.11 **ORGANIZATION OF THE THESIS**

The thesis has been organized into six chapters.

*Chapter – I*

**Introduction**

The first chapter in the present thesis deals with the introduction to the concept of stress and its origin from ancient and modern perspective. This chapter categorizes the major types of stress for understanding the concept of stress in a better way. Further, the chapter enlightens on the sources of stress, impact of stress and coping strategies in general and with respect to the work environment. This chapter highlights on the IT industry in India by emphasizing the stress at work in IT sector. Finally, concludes with the motivation of the study based on the discussions.
Chapter – II

Review of Literature

The chapter is the outcome of a survey of stress-related research literature, particularly as applied to work in business organizations. Relevant articles have been collected, classified, and summarized. Attempts were made to extract information as to: i) perceived causes of work stress, ii) self-assessed stress levels, iii) job satisfaction and intention to quit and iv) coping strategies adopted by the IT professionals to reduce occupational stress. Further, identifies the gap in the research orientation of the studies reviewed.

Chapter – III

Research Methodology

The third chapter explains the methodology of the research where the research design will be specified. It elaborates the theoretical research framework with all necessary and relevant discussion. Further the objectives and hypotheses of the study were stated. The sampling design, data collection methods, questionnaire construction and organization of the thesis are explained in this chapter.

Chapter – IV

Organizational Stressors & Occupational Stress

This chapter presents the descriptive statistics of the survey conducted on 700 IT professionals from selected IT companies from major information technological hubs of India. The data was tabulated with their frequency, mean and standard deviation to uncover the demographic profile of the respondents. The stressors, stress levels, job satisfaction and coping strategies are subject matter of this chapter.
Chapter – V

**Impact of Occupational Stress & Coping Strategies**

This chapter mainly deals with the hypotheses testing. Every hypothesis is tested carefully by applying appropriate statistical tools like chi-square; paired t-test, correlation, ANOVA, and linear regression analysis to arrive at accept or reject decision outcomes.

Chapter – VI

**Discussions, Suggestions and Conclusion**

This chapter provides the summary of overall thesis. It encompasses the summary of the statistical analysis, discussion of major findings and implications of the study. Further, it provides the limitations of the study and recommendations for further research.

**Conclusion**

This chapter starts with the statement of the problem on the stress faced by IT professionals in India today. The five specific objectives set for the study were derived from the problem statement and review of literature. Twenty hypotheses were formulated based on the objectives of the study, explaining relationships between independent and dependent variables. The survey was conducted on IT professionals employed in leading IT companies located in prominent IT hubs. Structured questionnaire was designed and pretested for its reliability using Cronbach’s alpha scores. A total of 700 questionnaires were distributed to IT professionals. Data generated from 482 valid, usable questionnaires were tabulated and statistically analysed, employing simple descriptive statistics as well as advanced tools such as regression, ANOVA, Correlation and z – test, etc.