CHAPTER III
RESEARCH METHODOLOGY
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Introduction

This chapter lists out the methodology followed by the researcher for the present study. It elaborates on the concepts used in the study, universe, design, sampling, tools used for data collection, data analysis, limitations of the study and finally the organization of the study report.

3.1 Definition of Concepts

Role – Role is the position one occupies in a social system and is defined by the functions one performs in response to the expectations of the significant members of a social system, and one’s own expectations from that position/office.

Organizational Role- Organizational role is a position in the organization defined by the expectations of the significant people therein. Occupation of an organizational role has an inbuilt potential for stress. (Pareek, 1993& 2002)

Role stress- Stress due to occupation of a role is known as role stress. When an individual is unable to meet the physical and psychological pressures of his role, it results in role stress. Occupation of an organizational role has an inbuilt potential for stress. Pareek (1983) has developed a tool for measuring Organizational Role stress called Organizational role stress scale which elaborates on ten role stressors found in organizations that contribute to the stress of employees.

Quality of Work life- Walton. R.E (1973) had explained quality of work life in terms of eight broad conditions of employment that constitute desirable quality of work life. Those criteria are used for measuring QWL in the present study and includes adequate and fair compensation, safe and healthy working conditions, opportunity to use and develop human capabilities, opportunity for career growth,
Social integration in the work force, constitutionalism in the work organization, work and quality of life and social relevance of work. In other words Quality of working life is the degree to which members of a work organization are able to satisfy important organisational needs through their experience in the Organisation.

**Job Satisfaction** – Locke (1976) had stated that job satisfaction is a pleasurable positive state resulting from one's job and job experience. Job satisfaction has been defined as the positive orientation of an individual towards the work role which he is presently occupying (Vroom.V.R.1964).

**Women executives**- The women employees who are above 21 years of age, with a minimum of an year’s work experience, working in the administration, finance or Human resource department of any Information technology, Information technology enabled services, manufacturing and service sectors in and around Chennai region refers to the women executives who are covered in the present study.

**Sectors covered in the study**

**Information Technology Sector (IT)**- IT Services are broadly defined as systems integration, processing services, information services outsourcing, packaged software support and installation, hardware support and installation.

**Information Technology Enabled Services (ITES)**: IT enabled Services are human intensive services that are delivered over telecom networks or the internet to the range of business segments which will include medical transcription, digital content development / animation, remote Maintenance, back office operations - Accounts/Financial services, data Processing, Call Centres, Engineering and Design, Human Resources Services, Insurance Claim Processing, Payroll Processing, Support Centres, Website Services, Business Process Outsourcing ( BPOs) units etc.

**Manufacturing Sector**: The business dictionary defines manufacturing sector as an agglomeration of industries engaged in chemical, mechanical, or physical transformation of materials, substances, or components into consumer or industrial
goods. The researcher has included those companies that manufacture automobile and automobile ancillary products, under the manufacturing sector.

**Service Sector:** Service sector encompasses all the industries except those in the goods producing sector i.e, agriculture, manufacturing, mining and construction. Services here includes transport, communication, public utilities, wholesale & retail trade, finance, insurance, real estate, personal and business services and some departments in the Government. (Kutscher. E. Ronald 1983). The present study has considered logistics, retail trade, finance and education services under service sector.

3.2 **Variables and Indicators used in the study**

A concept which can take on different quantitative values is known as a variable. If one variable is a consequence of the other variable, it is termed as a dependent variable and the variable that is an antecedent to the dependant variable, it s known as an independent variable (Kothari. C.R. 2004).

3.2.1 **Dependent Variables**

**Organisational Role Stress**

For the measurement of respondent’s level of Organisational role stress, ten organizational role stressors were used like Inter role distance, resource inadequacy, personal inadequacy, role isolation, role ambiguity, self role distance, role overload, role erosion, role stagnation and role expectation conflict.

**Quality of Work life:** To measure Quality of work life of the respondents, Walton’s (1973) dimensions in measuring QWL like adequate and fair compensation, immediate opportunity to use and develop human capacities, opportunity for continued growth and security, social integration in the work organization, constitutionalism in the work organization, work and total life space and the social relevance of work life are used in addition to job security, organizational structure, suitability of working hours, employee’s participation in management, effective redressal of grievances are also analysed.
**Job Satisfaction:** To analyse the level of job satisfaction of respondents, the indicators used are satisfaction with pay, supervisory relationship, interpersonal relationship among the colleagues, organizational working conditions, merit based pay, opportunity to learn new skills, fair treatment of employees, jobs matching the qualification, satisfaction with welfare facilities etc are analyzed.

### 3.2.2 Independent Variables

Demographic variables like age, income, marital status, type of family, designation, sectors to which respondents belong to, experience and educational qualification form the independent variables of the study.

### 3.3 Hypotheses

Assumptions about the relationship between two or more variables form Hypotheses. It guides the researcher in analyzing the data. Though in social science research unlike mathematical research, it is almost impossible to prove the relationship between variables, hypothesis is used as a guideline for data analysis. The following are the hypotheses used in the study.

1. There is no significant relationship between the demographic variables and total Organizational role stress of the employees.

2. There is no association between organizational role Stress and religious affiliation of the respondents.

3. There is no significant difference between the designation and the Organizational role stress of employees.

4. There is no significant difference between the marital status and the Organizational role stress of employees.

5. There is no significant difference between job satisfaction of the employees and the sector in which they are working.
6. There is no linear relationship between factors affecting Quality of work life and level of job satisfaction of women executives.

7. There is no significant relationship between Quality of work life and designation of the employees in the IT sector.

8. There is no significant relationship between Job satisfaction of the employees and their designation in the IT sector.

9. There is no significant difference in the Organisational role stress of the employees with reference to the sector in which they are working.

10. There is no significant difference in the type of family and the job satisfaction of the employees

3.4 Research Design

The study has adopted a descriptive diagnostic design. Descriptive research is a method of accurately laying down the features of the population under study as they are, without any bias so as to ensure the reliability of the information collected. A diagnostic study explores the relationship between key variables. This research design was found more appropriate for the present study, as it aims at portraying the actual perceptions of the Women executives across major sectors in Chennai. Besides portraying the real issues faced by women, the study goes further to analyse psycho social variables and interrelationship among various variables. Apart from this, the study also aims at establishing relationship between the variables -Job satisfaction, role related stress in Organisations, and Quality of Work life.

3.5 Field of Study

The field of study refers to the regions in and around Chennai, as it is a significant hub of manufacturing, IT, ITES and service sectors in Tamilnadu. With the advent of Information Communication Technology (ICT) Policy of Tamilnadu
(2008), Government of Tamilnadu is paying considerable attention on the expansion of the IT sector. Tamilnadu has been amongst the top three States in terms of Information Communication and Technology (ICT) investments and production. It has emerged as a hub for software, hardware and research & development. The large number of Indian and Multinational corporations (MNC’s) established in Tamil Nadu is a testimony of its significance in Indian IT Industry.

Chennai has a large number of service organizations pertaining to banking, retail and hospitality sectors. Employment of women in these sectors is increasing due to the nature of the sector with women friendly policies. Majority of the manufacturing Companies are located in the industrial parks of Chennai like Sriperumbudur, Irungattukottai, Oragadam and Ennore, while IT/ITES Companies are located in Info parks like Mahindra city and Tidel Park, companies operating in the service sector are located within the city. The reason for choosing companies in and around Chennai region as the universe has been summed up in the figure given below.

**Figure 3.1 Depicting the reasons for choosing Chennai as the field of study**

Source: compiled by the researcher based on the information from [www.tidco.com](http://www.tidco.com)
3.6 Sources of Data

Primary and secondary inputs form the basis of data for the present study. Primary data was collected through well structured and standardized tools distributed among women executives working in manufacturing, IT/ITES and service sectors located in and around Chennai region. Secondary data was collected through various magazines, books, newspapers, prominent television chat shows related to gender & society, web sources, e-library and journals. Conventions and conferences exclusively for women managers, workshops and discussion forums held by Management Associations, NASSCOM HR Summit etc gave a wide platform for gaining knowledge about the problem under study. Apart from this, various organizations in these sectors were visited and the interaction with Human Resource professionals and women employees also served as data for the present study.

3.7 Sampling Strategy

The respondents for this study were drawn from all the four major sectors in Chennai i.e., IT/ ITES, Service & Manufacturing sectors. Since most of the manufacturing Companies are located in the industrial parks of Chennai like Sriperumbudur, Irungattukottai, Oragadam and Ennore, IT/ITES Companies located in Info parks like Mahindra city, Tidel Park, etc., and Service sector companies located within the city, the sampling strategy has ensured that a vast coverage of the population in and around Chennai is done. Universe in the study refers to all the women executives working in administration, finance or HR department of any Information Technology, Information Technology enabled services, manufacturing, and service sector companies in and around Chennai region.

The researcher has adopted ‘Stratified two stage sampling’ in which the stratification variable refers to the sectors chosen for the study. Thus, the status of variable refers to manufacturing, IT, ITES and Service sectors. The companies within the stratum were chosen. Companies were selected on the basis of availability of quantum of women executives. After identifying strata for the study, two stage
sampling was carried on within each stratum where primary stage units (PSU) were 
the companies and the secondary stage units refer to women executives from each of 
these companies. From the selected units (companies) samples (women executives) 
were randomly chosen.

The strata were framed based on the sectors i.e., manufacturing, IT, 
ITES, & Service sectors. Stratum-I contained companies from manufacturing sector, 
Stratum-II had IT, ITES Companies and stratum III had companies belonging to the 
service sector. From Stratum I, 16 Companies were chosen at random which yielded 
94 respondents. The rationale behind the choice of more number of companies was 
due to the lesser number of women executives in the manufacturing sector. Stratum 
II had 15 companies chosen at random with 221 respondents and stratum III had 15 
companies with 135 samples responding to the questionnaire. The IT, ITES and 
Service sector companies have more number of women employees at the executive 
level. Thus the second stage of selection includes 94 respondents from 
manufacturing companies, 221 from IT & ITES Sectors, and 135 samples from 
Service sector companies.

**Figure 3.2 Showing the distribution of respondents in various sectors**
Out of these organizations, those who gave permission, and the women executives who were willing to participate in the study are covered. With the help of the HR Department in these organizations the respondents were identified. There was considerable diversity in respondents’ socio, economic and demographic profiles. The rationale behind the use of ‘Stratified two stage sampling’ was to accommodate the divergence among the women executives across sectors.

3.8 Tools used for Data Collection

The primary tool of data collection was a well structured questionnaire and secondary data was collected from Journals, reports, and publications connected with the Industry and previous studies on the related areas. The Questionnaire had four sections with questions about their perception on the factors affecting the quality of Work life, level of job satisfaction and role related antecedents causing stress. The first section covered respondents' demographic profile such as age, education, occupation, type of family, income, designation, experience etc. The second section covered different dimensions of Organizational role stress through a standardized tool on ‘Organizational role stress’ (ORS scale) developed by Pareek .U (1982) .ORS Scale is used to measure 10 role stressors, i.e., Inter role distance, Self Role distance, role stagnation, role isolation, role ambiguity, role expectation conflict, role overload, role erosion, resource inadequacy and personal inadequacy through fifty statements. ORS is a 5 point scale (0-4), containing five items for each role stress with a total of 50 statements. Thus the total scores on each role stress range from 0 -20. The ten role stressors in the ORS Scale include the following:

1. Inter-role distance (IRD) represents conflict between organizational and nonorganizational roles.

2. Role stagnation (RS): The feeling of being ”stuck” in the same role.

3. Role expectation conflict (REC): Conflicting expectations and demands between different role senders.
4. Role erosion (RE): The feeling that functions that should belong to the respondent’s role are being transformed/Performed or shared by others.

5. Role overload (RO): The feeling that more is expected from the role than the respondent can cope with.

6. Role isolation (RI): Lack of linkages between the respondent’s role and that of other roles in the organization.

7. Personal inadequacy (PI): Inadequate knowledge, skills, or preparation for a respondent to be effective in a particular role.

8. Self-role distance (SRD): Conflict between the respondent’s values/self-concepts and the requirements of his or her organizational role.

9. Role ambiguity (RA): Lack of clarity about others’ expectations of the respondent’s role, or lack of feedback on how others perceive the respondent’s performance.


The scale was tested for reliability and the cronbach α was 0.962. This was followed by questions to assess the physical and emotional symptoms/consequences of stress.

The third section dealing with questions to assess ‘Quality of Work life’ was developed by the researcher to assess the respondents’ views on the factors that they perceive as those which add quality to their work life. Walton. R.E (1973) had developed eight determinants for quality of work life. This included satisfaction with pay, scope for development of human capacities, social relevance of the work life, constitutionalism in the work organization, security, work and total life space, social integration in the work place and safe working conditions. The Quality of Work life survey, developed by National Institute of Occupational safety and Health (NIOSH),
was also used in the preparation of the items. NIOSH had questions related to culture, climate, and outcomes on health, hours of work, performance, satisfaction, commitment and resource adequacy covering more than 75 items. The tool prepared by the researcher consisted of 16 items. The questionnaire was subjected to evaluation by industry and academic experts and their inputs shaped up the final structure of the questionnaire. Relevant inputs to suit Indian conditions were also added. The cronbach $\alpha$ was 0.937 assuring high reliability to the tool.

The fourth section consisted of 25 items which were a part of the standardized tool developed by Dubey, B.L., Uppal, K.K., & Verma, S.K (1989) to assess the Job satisfaction of employees. This is a 25 item scale on a five point scale, strongly agree to score 0-4 item. Total ranges from 0-100 per subject. Reliability of the scale is test retest = 0.64, Split half reliability coefficient =072. (Pestonjee, D.M. 1995). The reason for using two standardized scales was that scales are highly reliable, standardized, impersonal, easier to tabulate and can be correlated meaningfully.

Information was also obtained through the Case studies and depth interviews with a few samples pertaining to various sectors. Though the focus of the study is only women executives, their male colleagues were also interviewed in a few cases to elicit the attitude of male colleagues towards their female counterparts in the work place.

3.9 **Pilot study and Pre testing of tools of data Collection**

The pilot study consisted of three phases. In the first phase the tool was subjected to expert analysis and based on the feedback received, some changes were incorporated in the main questionnaire. This included omission of certain personalized questions and incorporation of those practices related to the variables that did not exist in those industries. In the third phase, a Pilot study was conducted among 75 women executives belonging to the IT, ITES, manufacturing and service sectors to study the reliability and validity of the tools. Questionnaires were distributed and responses were collected. The chief objective of the pilot study was
to test the validity and reliability of the questionnaire and to know the problems faced by the respondents in answering the questions. The pretest enabled the researcher to have a forerunner of the actual data collection and envision the possible challenges in the data collection. The pretest confirmed that the items in the questionnaire are suited for the population under study. The reliability scores of the tools used in the study is presented in the Table 3.1.

**Table 3.1 indicating reliability scores of the tools used in the study**

<table>
<thead>
<tr>
<th>Tool</th>
<th>No: of items</th>
<th>Cronbach α score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organisational role stress scale</td>
<td>50</td>
<td>0.962</td>
</tr>
<tr>
<td>Quality of work life questionnaire</td>
<td>16</td>
<td>0.937</td>
</tr>
<tr>
<td>Job satisfaction scale</td>
<td>25</td>
<td>0.936</td>
</tr>
</tbody>
</table>

Source: Primary Data

The reliability scores signify that the scale values are fit for further application and is reliable.

### 3.10 Actual data Collection

The data was collected from April 2012 to December 2012. The manufacturing companies had fewer women at the executive level and hence had limited respondents whereas IT/ITES and service sector companies had more women employees. IT/ITES employees preferred questionnaires to be e-mailed to them due to the nature of their jobs. There were women working in day shifts, night shifts as well as rotating shifts. An online tool was developed to collect data through www.surveymonkey.com. In depth interviews were conducted on a few selected samples in each of the sectors to assess their perception towards all the study variables. The researcher directly got in touch with the heads of the HR Departments in order to seek the permission to proceed with the study. Based on the guidelines of ethics, those who were willing to answer the questions were included in this study. After getting permission, the researcher personally visited the organizations and distributed the questionnaires to them. In this context, the researcher had to
make 3-4 visits to each organization. Thus, a total of 450 women executives were covered who were working in the above mentioned sectors in Chennai.

3.11 Statistical Tools applied for Analysis

The collected data was carefully scrutinized and coded. The information given in the schedule have been entered in the spread sheet and then converted into Statistical Package for Social Sciences (SPSS version 16) to perform statistical analysis.

First, the demographic and socio-economic data were analyzed and represented using frequency tables and diagrams wherever applicable. Secondly, descriptive statistics were used to examine the mean scores, and standard deviation on the dimensions of Organisational role stress and its relative difference with each of the other variables. The analyses included Kruskall Wallis test and Analysis of Variance (Anova). Diagrammatic representations, simple frequency tables, basic descriptive statistics like Mean, Median and standard deviation have provided the details in a nutshell.

Analysis of Variance (abbreviated as ANOVA) as developed by Prof.R.A.Fisher, is a procedure for testing the difference among different groups of data for homogeneity. It is a method of analyzing the variance to which a response is subject into its various components corresponding to various sources of variation. If only one factor is considered for investigations of the differences amongst its various categories having numerous possible values, it is called as One way ANOVA. In the present study, ANOVA was used to know whether any significant difference exists between the variables of the study and the personal and work profile of the respondents. (Kothari.C.R.2004).

Kruskall Wallis test is analogous to the one way analysis of variance (ANOVA) but unlike the latter it does not require the assumption that the samples come from approximately normal populations or the universes having the same standard deviation .In the present study, K-W test is employed to find out the
significant difference between the key variables like ORS, Quality of work life and Job satisfaction with some demographic variables like age, sector, experience etc (Kothari.C.R. 2004).

Factor Analysis is the most often used multivariate technique of research applicable when there is a systematic interdependence among a set of observed or manifest variables and the researcher is interested in knowing something that causes this commonality. The variables are grouped into factors based on the correlation between variables and the new factors derived are treated as new variables. Their value is arrived by summing the values of the original variables which are grouped as a factor. The derived factor loadings represent the correlation between the particular variable and the factor. In the present study, factor analysis has been employed to know the factors influencing quality of work life and job satisfaction. Lal Das D.K. (2005).

Regression refers to the determination of a statistical relationship between two or more variables A sectorwise regression model for Quality of work life also has been developed. Regression analysis is a statistical method to deal with the formulation of a mathematical model depicting relationship amongst variables which can be used for the purpose of prediction of the values of dependent variables, given the values of the independent variable.

Correlation developed by Charles Spearman in the early 1900s, is a measure of association that is based on the ranks of the observations and not on the numerical values of data. The value of Spearman’s rank correlation coefficient will always vary between +_ 1, +1 showing a perfect positive correlation and -1 depicting perfect negative correlation between two variables. The researcher’s study observed correlation between the ten Organisational role stressors, quality of work life and job satisfaction (Kothari.C.R.2004).

Cronbach’s alpha tests the reliability of a tool, and validates it. Cronbach’s alpha value of the ORS Scale is 0.962, for quality of work life is 0.937, and for job satisfaction is 0.936 indicating that the scale is highly reliable for the study.
3.12 Research Ethics

Each step in the research process was in strict adherence to research ethics. The researcher went to meet the HR heads of the organizations to explain the purpose of the study. Confidentiality and anonymity were assured. Non disclosure agreement was signed with those organizations who did not want to reveal the details of the organization as well as that of the respondents.

3.13 Limitations of the study

The sample size is 450 representing four sectors. Manufacturing sector has limited number of women in the executive level whereas in the other three sectors availability of women executives was more. The size of the universe is so vast and a comprehensive and reliable list of the organizations in each sector was not available.

The strength of the study lies in the wide range of the participating companies from diverse sectors and work environments. However, the findings of the study are limited to the respondents of the study alone and cannot be generalized.

3.14 Organisation of the study report

The study is composed of six chapters. The first chapter is introductory in nature indicating statement of the problem, rationale of the study and objectives of the study.

Chapter II gives survey of various studies which are of immediate relevance to the research problem.

Chapter III presents the research methodology adopted for the study.

Chapter IV is analysis and interpretation of data.

Chapter V gives summary of findings along with discussion on the major findings.
Chapter VI includes recommendations, conclusion and scope for further research.

The chapter concludes with a model of intervention developed based on the findings of the study.

After having presented the research methodology in this chapter, the researcher will present the analysis of the data in the following chapter.