RESEARCH METHODOLOGY

Research methodology is the systematic way to solve the research problem. This is significant in any research issue because it assures authority and authenticity of the research results. It specifies the methodology adopted and explains the logic underlying the use of them.

3.1 RESEARCH DESIGN

The present study is designed as a descriptive research design based on primary data and secondary data. Descriptive research includes surveys and fact finding enquiries of different kinds. The major purpose here is the description of the state of affairs as it exists at present. In social science and business research the term Ex post-facto research is used for descriptive research studies. This includes attempts by researchers to discover causes even when they cannot control the variables. The methods utilized in this research are survey methods of all kinds, including comparative and correlation methods.

The population of the study includes the employees working in the BPO sector organizations. The respondents in the study included BPO employees from process analyst level to manager / division head level. The respondent’s area of work includes financial accounting, customer services, human resource, application process, procurement and others. As the population to be covered is very large and spread across different states a representative sample of 400 BPO employees were taken from BPO companies located in Karnataka and Kerala.

A pilot study has been conducted by choosing 50 respondents (employees) from different levels of 5 BPO organizations located in Karnataka. The above study equipped the researcher with a strong base in the development of the questionnaire. It also helped in proposing the statements (attrition factors) which affect the employee attrition in identifying the right respondents from different BPO sectors and in data analysis. Reliability analysis has been done by taking a sample of 50 respondents. In all, the reliability of the three statistics namely, Spearman-Brown, Guttman and Cronbach’s alpha showed that the reliability of scale constructed for the general
assessment is between 0.70 and 0.87, which makes the constructed scale fairly reliable.

3.2 STATEMENT OF THE PROBLEM

Over the past decade, the Indian IT-BPO sector has become the country’s premier growth engine, crossing significant milestones in terms of revenue growth, employment generation and value creation.

‘People are our greatest asset’ is a mantra that companies have been chanting for years. But only a few companies have started putting Human Resources Management (HRM) systems in place that support this philosophy. The issue of employee attrition/tturnover has been found to be making huge economic impact on the organizations. The average costs of replacing today's defecting work force are eating away the profitability of even the healthiest organizations.

Karnataka has witnessed exceptional growth in the IT services and product companies proving to be a large employment base for the state's engineering graduates. Bangalore is the choice destination for more than 450 MNCs, 66 global Fortune500 companies apart from innumerable home grown companies. This favorable situation has led the researcher to select Karnataka as one of the population base.

Kerala state Government’s support and the excellent infrastructure available at Techno- Park Trivandrum and Info-Park Kochi have encouraged the BPO companies to locate their units in Kerala. High density of Science and Technology manpower, talent pool of English speaking personnel, annual intake of over 25,000 engineering students each year are the factors which contributed to the growth of the BPO sector in Kerala. It hosts over 120 IT and ITES companies, employing over 15,000 IT professionals. The above favorable situation existing in Kerala state has led the researcher to choose Kerala as one of the base for the population of the study.

The biggest problem faced by BPO organizations located in Karnataka and Kerala today is the increased employee attrition, which varies between 20%–50%. The population of the study includes the employees working in the BPO sector organizations located in the states of Karnataka and Kerala. A comprehensive study to identify the critical factors causing high employee attrition in the BPO sector in
Karnataka and Kerala states has been found to be the need of the hour. Also there existed a strong need to make an in-depth comparative study on the factors causing high employee attrition in the BPO sector companies located in Karnataka and Kerala states. This study is an earnest attempt to make a detailed analysis of the above issue.

### 3.3 SCOPE OF THE STUDY

The core of a knowledge based industry (BPO) is the people and its success definitely depends on the quality of available talent. In order to implement a successful business strategy to face global challenges, organizations must ensure that they have the right people capable of delivering the strategy.

This research is designed to study the nature, state and the critical factors affecting high employee attrition in the BPO companies located in the states of Karnataka and Kerala. Also, an attempt has been made to conduct a comparative study between the states of Karnataka and Kerala employees in identifying and comparing the critical factors causing high employee attrition in this sector.

Specifically the study aimed at identifying the critical factors affecting high employee attrition in BPO sector and suggesting remedial measures to address the high attrition problem. The different BPO sectors (area of work) included in this study are financial accounting, customer services, procurement, human resource, application process and others. The major BPO companies selected from Karnataka for the study include Infosys BPO, Mphasis BPO, Accenture, Xchanging Plc., Ernst & Young, Deutsche Bank, and IBM-Daksh. The selected BPO organizations from Kerala are located in Techno Park Trivandrum and Info ParkCochin. The BPO’s selected from Kerala includes Allianz Corn Hill, Revenue Med– BPO, Geotran Technologies, Accentia Technologies, Enter Technologies, Spheridian Technologies, Global Data Systems, i-Dynamics and Alamy India. The present study offers scope for identifying the critical factors affecting the high attrition which will help to address the major issues affecting BPO sector in both the states.

### 3.4 SIGNIFICANCE OF THE STUDY

India is at the forefront of the rapidly evolving Business Process Outsourcing (BPO) market and is well established as a’ destination of choice’ among global outsourcers. BPO revenues in FY09 contributed 1% of GDP and 4% of India’s exports. IT-BPO
exports (including hardware exports) reached USD 46.6 billion in FY09 as against USD 40.9 billion in FY08, a growth of 14 per cent (Chiamsiri S et al, 2005).

Human capital is the real asset for any organization, and this makes the HR role important in recruiting, managing, and retaining the best. There are a number of challenges in the Indian ITES industry which require the serious attention of HR managers. An urgent priority for most of the organizations is to have an innovative and competent HR pool; sound in HR management practices with strong business knowledge.

The study gives a warning signal to the BPO sectors, in Karnataka and Kerala to immediately adopt innovative strategies to tackle the continuing high attrition problem. This study will be helpful to the management of BPOs located in Karnataka and Kerala states to focus on the critical factors identified in the study in addressing the attrition problem. Also the study will enable the readers, researchers and practitioners (HR Managers) to have a professional approach in addressing the critical issue of employee attrition.

3.5 OBJECTIVES OF THE STUDY

3.5.1. Primary Objectives:

1. To study the variation in factors causing high employee attrition among different Areas of BPO.
2. To study the variation in factors causing high employee attrition between the states of Karnataka and Kerala.
3. To study the variation in factors causing high employee attrition between national and multinational BPOs.
4. To study the variation in factors causing high employee attrition among the respondent’s age groups.
5. To study the relationship between maximum number of hours worked and the employee attrition.
6. To study the difference among the designation groups towards employee attrition.
7. To study the similarities and dissimilarities between the states of Karnataka and Kerala among the employee attrition factors.
8. To study the nature and state of high employee attrition in BPO sector companies.
9. To identify the critical factors causing high employee attrition in the BPO sector.
10. To identify the non-critical factors causing high employee attrition in the BPO sector.

11. To study the reasons for stress and rank them in the BPO work environment.

12. To suggest innovative measures for reducing employee attrition in BPOs.

3.5.2. Secondary objectives:

1. To ensure increased customer satisfaction in the case of BPO Companies.
2. To suggest measures to enhance the image of the BPO sector companies.
3. To suggest innovative methods for employee retention in BPO sector.
4. To suggest improvement measures for the BPO sector organizations to become an employer-of-choice.
5. To reduce the risk factor involved in managing an organization with very high employee attrition.

3.6 HYPOTHESES FRAMED

3.6.1 Objective: To study the variation in factors causing high employee attrition among different areas of BPO

Hypothesis 1.1

H0: 1.1. There is no significant difference among the BPO areas in the average scores of lack of integration and goal setting.

H1: 1.1. There is significant difference among the BPO areas in the average scores of lack of integration and goal setting.

Hypothesis 1.2

H0: 1.2. There is no significant difference among the BPO areas in the average scores of motivation and appreciation.

H1: 1.2. There is significant difference among the BPO areas in the average scores of motivation and appreciation.

Hypothesis 1.3

H0: 1.3. There is no significant difference among the BPO areas in the average scores of work atmosphere.

H1: 1.3. There is significant difference among the BPO areas in the average scores of work atmosphere.
Hypothesis 1.4
H₀: 1.4. There is no significant difference among the BPO areas in the average scores of labour welfare and corporate governance.
H₁: 1.4. There is significant difference among the BPO areas in the average scores of labour welfare and corporate governance.

Hypothesis 1.5
H₀: 1.5. There is no significant difference among the BPO areas in the average scores of maximum number of hours worked.
H₁: 1.5. There is significant difference among the BPO areas in the average scores of maximum number of hours worked.

Hypothesis 1.6
H₀: 1.6. There is no significant difference among the BPO areas in the average scores of dissatisfaction with rewards and hikes.
H₁: 1.6. There is significant difference among the BPO areas in the average scores of dissatisfaction with rewards and hikes.

Hypothesis 1.7
H₀: 1.7. There is no significant difference among the BPO areas in the average scores of human resource management practices.
H₁: 1.7. There is significant difference among the BPO areas in the average scores of human resource management practices.

Hypothesis 1.8
H₀: 1.8. There is no significant difference among the BPO sectors in the average scores of dissatisfaction with salary and perks.
H₁: 1.8. There is significant difference among the BPO sectors in the average scores of dissatisfaction with salary and perks.

Hypothesis 1.9
H₀: 1.9. There is no significant difference among the BPO sectors in the average scores of food and relaxation.
H₁: 1.9. There is significant difference among the BPO sectors in the average scores of food and relaxation.
Hypothesis 1.10

$H_0$: There is no significant difference among the area of work groups in the average lack of transportation and talent scores.

$H_1$: There is significant difference among the area of work groups in the average lack of transportation and talent scores.

Hypothesis 1.11

$H_0$: There is no significant difference among the area of work groups in the average work and family conflict scores.

$H_1$: There is significant difference among the area of work groups in the average work and family conflict scores.

Hypothesis 1.12

$H_0$: There is no significant difference among the area of work groups in the average work from home scores.

$H_1$: There is significant difference among the area of work groups in the average work from home scores.

Hypothesis 1.13

$H_0$: There is no significant difference among the area of work groups in the average lack of work ethics scores.

$H_1$: There is significant difference among the area of work groups in the average lack of work ethics scores.

3.6.2 Objective: To study the variation in employee attrition factors between the states of Karnataka and Kerala.

Hypothesis 2.1

$H_0$: There is no significant difference between the employees of Karnataka and Kerala in the average scores of dissatisfaction with salary and perks.

$H_1$: There is significant difference between the employees of Karnataka and Kerala in the average scores of dissatisfaction with salary and perks.
Hypothesis 2.2
H0:2.2. There is no significant difference between the employees of Karnataka and Kerala in the average scores of lack of integration and goal setting.
H1:2.2. There is significant difference between the employees of Karnataka and Kerala in the average scores of lack of integration and goal setting.

Hypothesis 2.3
H0:2.3. There is no significant difference between the employees of Karnataka and Kerala in the average scores of work atmosphere.
H1:2.3. There is significant difference between the employees of Karnataka and Kerala in the average scores of work atmosphere.

Hypothesis 2.4
H0:2.4. There is no significant difference between the employees of Karnataka and Kerala in the average scores of food and relaxation.
H1:2.4. There is significant difference between the employees of Karnataka and Kerala in the average scores of food and relaxation.

Hypothesis 2.5
H0:2.5. There is no significant difference between the employees of Karnataka and Kerala in the average scores of dissatisfaction with rewards and hikes.
H1:2.5. There is significant difference between the employees of Karnataka and Kerala in the average scores of dissatisfaction with rewards and hikes.

Hypothesis 2.6
H0:2.6. There is no significant difference between the employees of Karnataka and Kerala in the average scores of lack of work ethics.
H1:2.6. There is significant difference between the employees of Karnataka and Kerala in the average scores of lack of work ethics.
Hypothesis 2.7

$H_0$: 2.7 There is no significant difference between the employees of Karnataka and Kerala in the average motivation and appreciation scores.

$H_1$: 2.7 There is significant difference between the employees of Karnataka and Kerala in the average motivation and appreciation scores.

Hypothesis 2.8

$H_0$: 2.8 There is no significant difference between the employees of Karnataka and Kerala in the average work from home scores.

$H_1$: 2.8 There is significant difference between the employees of Karnataka and Kerala in the average work from home scores.

Hypothesis 2.9

$H_0$: 2.9 There is no significant difference between the employees of Karnataka and Kerala in the average work and family conflict scores.

$H_1$: 2.9 There is significant difference between the employees of Karnataka and Kerala in the average work and family conflict scores.

Hypothesis 2.10

$H_0$: 2.10 There is no significant difference between the employees of Karnataka and Kerala in the average labor welfare and corporate governance scores.

$H_1$: 2.10 There is significant difference between the employees of Karnataka and Kerala in the average labor welfare and corporate governance scores.

Hypothesis 2.11

$H_0$: 2.11 There is no significant difference between the employees of Karnataka and Kerala in the average occupational health problems scores.

$H_1$: 2.11 There is significant difference between the employees of Karnataka and Kerala in the average occupational health problems scores.
Hypothesis 2.12  
H₀: 2.12 There is no significant difference between Karnataka and Kerala employees in the average scores of human resource management practices scores.  
H₁: 2.12 There is significant difference between Karnataka and Kerala employees in the average scores of human resource management practices scores.  

Hypothesis 2.13  
H₀: 2.13 There is no significant difference between Karnataka and Kerala employees in the average strength factors scores.  
H₁: 2.13 There is no significant difference between Karnataka and Kerala employees in the average strength factors scores.  

3.6.3 Objective: To study the variation in factors causing high employee attrition between national and multinational BPOs.  

Hypothesis 3.1  
H₀: 3.1. There is no significant difference between national BPO employees and multinational BPO employees in the average scores of lack of integration and goal setting.  
H₁: 3.1. There is significant difference between national BPO employees and multinational BPO employees in the average scores of lack of integration and goal setting.  

Hypothesis 3.2  
H₀: 3.2. There is no significant difference between national BPO employees and multinational BPO employees in the average scores of dissatisfaction with salary and perks.  
H₁: 3.2. There is significant difference between national BPO employees and multinational BPO employees in the average scores of dissatisfaction with salary and perks.
Hypothesis 3.3
H0:3.3. There is no significant difference between national BPO employees and multinational BPO employees in the average scores of dissatisfaction with rewards and hikes.
H1:3.3. There is significant difference between national BPO employees and multinational BPO employees in the average scores of dissatisfaction with rewards and hikes.

Hypothesis 3.4
H0: 3.4. There is no significant difference between national and multinational BPO employees in the average scores of human resource management practices.
H1: 3.4. There is significant difference between national and multinational BPO employees in the average scores of human resource management practices.

Hypothesis 3.5
H0: 3.5. There is no significant difference between national BPO employees and multinational BPO employees in the average scores of work atmosphere.
H1:3.5. There is significant difference between national BPO employees and multinational BPO employees in the average scores of work atmosphere.

Hypothesis 3.6
H0: 3.6 There is no significant difference between national BPO employees and multinational BPO employees in the average scores of work and family conflict.
H1:3.6 There is significant difference between national BPO employees and multinational BPO employees in the average scores of work and family conflict.
Hypothesis 3.7
\[ H_0: 3.7 \] There is no significant difference between national BPO employees and multinational BPO employees in the average scores of food and relaxation.
\[ H_1: 3.7 \] There is significant difference between national BPO employees and multinational BPO employees in the average scores of food and relaxation.

Hypothesis 3.8
\[ H_0: 3.8 \] There is no significant difference between national BPO employees and multinational BPO employees in the average scores of motivation and appreciation.
\[ H_1: 3.8 \] There is significant difference between national BPO employees and multinational BPO employees in the average scores of motivation and appreciation.

Hypothesis 3.9
\[ H_0: 3.9 \] There is no significant difference between national BPO employees and multinational BPO employees in the average scores of labor welfare and corporate governance.
\[ H_1: 3.9 \] There is significant difference between national BPO employees and multinational BPO employees in the average scores of labor welfare and corporate governance.

Hypothesis 3.10
\[ H_0: 3.10 \] There is no significant relationship between maximum number of hours worked and the global position of the company.
\[ H_1: 3.10 \] There is significant relationship between maximum number of hours worked and the global position of the company.

Hypothesis 3.11
\[ H_0: 3.11 \] There is no significant difference between national BPO employees and multinational BPO employees in the average work from home scores.
\[ H_1: 3.11 \] There is significant difference between national BPO employees and multinational BPO employees in the average work from home scores.
3.6.4 Objective: To study the variation in factors causing high employee attrition among the respondent’s age groups

**Hypothesis 4.1**

H0: 4.1. There is no significant difference among the respondent’s age groups in the average scores of lack of integration and goal setting.

H1: 4.1. There is significant difference among the respondents’ age groups in the average scores of lack of integration and goal setting.

**Hypothesis 4.2**

H0: 4.2. There is no significant difference among the respondent’s age groups in the average scores of work and family conflict.

H1: 4.2. There is significant difference among the respondent’s age groups in the average scores of work and family conflict.

**Hypothesis 4.3**

H0: 4.3. There is no significant difference among the respondent’s age groups in the average scores of strength factor.

H1: 4.3. There is significant difference among the respondent’s age groups in the average scores of strength factor.

**Hypothesis 4.4**

H0: 4.4 There is no significant relationship between maximum number of hours worked and the age of the respondent.

H1: 4.4 There is significant relationship between maximum number of hours worked and the age of the respondent.

**Hypothesis 4.5**

H0: 4.5 There is no significant difference among the age of the respondent groups in the average human resource management practices scores.

H1: 4.5 There is significant difference among the age of the respondent groups in the average human resource management practices scores.
Hypothesis 4.6

$H_0$: 4.6 There is no significant difference among the age of the respondent groups in the average lack of work ethics scores.

$H_1$: 4.6 There is significant difference among the age of the respondent groups in the average lack of work ethics scores.

Hypothesis 4.7

$H_0$: 4.7 There is no significant difference among the age of the respondent groups in the average dissatisfaction with rewards and hikes scores.

$H_1$: 4.7 There is significant difference among the age of the respondent groups in the average dissatisfaction with rewards and hikes scores.

Hypothesis 4.8

$H_0$: 4.8 There is no significant difference among the age of the respondent groups in the average labour welfare and corporate governance scores.

$H_1$: 4.8 There is significant difference among the age of the respondent groups in the average labour welfare and corporate governance scores.

Hypothesis 4.9

$H_0$: 4.9 There is no significant difference among the age of the respondent groups in the average dissatisfaction with salary and perks scores.

$H_1$: 4.9 There is significant difference among the age of the respondent groups in the average dissatisfaction with salary and perks scores.

Hypothesis 4.10

$H_0$: 4.10 There is no significant difference among the age of the respondent groups in the average work from home scores.

$H_1$: 4.10 There is significant difference among the age of the respondent groups in the average work from home scores.

Hypothesis 4.11

$H_0$: 4.11 There is no significant difference among the respondents age groups in the average motivation and appreciation scores.

$H_1$: 4.11 There is significant difference among the respondents age groups in the average motivation and appreciation scores.
Hypothesis 4.12

H₀: 4.12 There is no significant difference among the respondents age groups in the average work atmosphere scores.

H₁: 4.12 There is significant difference among the respondents age groups in the average work atmosphere scores.

3.6.5 Objective: To study the relationship between maximum number of hours worked and the employee attrition.

Hypothesis 5.1

H₀: 5.1. The maximum number of hours worked is independent of the employee’s gender.

H₁: 5.1. The maximum number of hours worked is dependent on the employee’s gender.

Hypothesis 5.2

H₀: 5.2. The maximum number of hours worked is independent of the employee’s location.

H₁: 5.2. The maximum number of hours worked is dependent on the employee’s location.

Hypothesis 5.3

H₀: 5.3. The maximum number of hours worked is independent of the employee’s salary per month.

H₁: 5.3. The maximum number of hours worked is dependent on the employee’s salary per month.

Hypothesis 5.4

H₀: 5.4 The maximum number of hours worked is independent of the employee’s area of work.

H₁: 5.4 The maximum number of hours worked is dependent on the employee’s area of work.
3.6.6 Objective: To study the difference among the designation groups towards employee attrition.

**Hypothesis 6.1**

H0: 6.1. There is no significant difference among the designation groups in the average strength factor scores.

H1: 6.1. There is significant difference among the designation groups in the average strength factor scores.

**Hypothesis 6.2**

H0: 6.2. There is no significant difference among the designation groups in the average scores of work and family conflict.

H1: 6.2. There is significant difference among the designation groups in the average scores of work and family conflict.

**Hypothesis 6.3**

H0: 6.3. There is no significant difference among the designation groups in the average scores of motivation and appreciation.

H1: 6.3. There is significant difference among the designation groups in the average scores of motivation and appreciation.

**Hypothesis 6.4**

H0: 6.4 There is no significant difference among the designation groups in the average scores of lack of integration and goal setting.

H1: 6.4 There is significant difference among the designation groups in the average scores of lack of integration and goal setting.

**Hypothesis 6.5**

H0: 6.5 There is no significant difference among the designation groups in the average scores of work atmosphere.

H1: 6.5 There is significant difference among the designation groups in the average scores of work atmosphere.
Hypothesis 6.6

H₀: 6.6 There is no significant difference among the designation groups in the average scores of dissatisfaction with salary and perks.

H₁: 6.6 There is significant difference among the designation groups in the average scores of dissatisfaction with salary and perks.

Hypothesis 6.7

H₀: 6.7 There is no significant difference among the designation groups in the average scores of dissatisfaction with rewards and hikes.

H₁: 6.7 There is significant difference among the designation groups in the average scores of dissatisfaction with rewards and hikes.

Hypothesis 6.8

H₀: 6.8 There is no significant difference among the designation groups in the average scores of human resource management practices.

H₁: 6.8 There is significant difference among the designation groups in the average scores of human resource management practices.

3.7 SAMPLE DESIGN

The population of the study includes the employees working in the BPO sector organizations. The sampling procedure adopted for the study is Quota sampling technique. The sampling frame for the study comes to 65000 BPO employees (approx.) selected from Karnataka and Kerala. Out of this about 55000 (85%) employees belongs to Karnataka and 10000 (15%) employees are from Kerala. A representative quota of sample is taken from the population. A sample size of 400 respondents was fixed since a sample size of 400 gives a statistical accuracy of ± 5% and is often considered as the most cost-effective sample size (Answers research Inc., 2004). Out of the 400 respondents, 285(75%) were selected from employees working in different BPO areas located in Karnataka and 115(25%) employees were selected from different BPO areas of companies located in Kerala state.

Among the 400 sample respondents taken for the study, 240 (60%) of them were selected from process analyst (entry level) group, 100 (25%) were selected from senior-process analysts group, 30 (8%) of them were selected from team leaders category, 20 (5%) were chosen from supervisors group and 10 (2%) were selected
from manager’s group. Since employee attrition is the highest at the process analyst level (nearly 55%), 60% of the sample has been taken specifically from that group.

Also by considering the 6 BPO areas, suitable sample respondents were taken. The two major BPO areas chosen for the study includes financial accounting and customer services. Among the 400 respondents selected, 125 (31%) were chosen from financial accounting area and 125 (31%) were selected from customer services area. Also 65 (17%) were chosen from application process, 45 (11%) respondents were from human resources area, 15 (4%) were from procurement, and 25 (6%) were from other areas. The major BPO organizations selected in Karnataka state for the study are Infosys BPO, Deutsche Bank, Xchanging Plc (Old Cambridge Solutions), IBM-Daksh, Accenture, Cape Gemini, M-Phasis, Target Corporation, Ocwen financial services, Ernst and Young Axes online, Manipal Informatics, TCS. The BPO companies selected from Kerala include Ernst and Young, Enter Technologies, Sutherland global, Accentia Technologies, Revenue Med Spheridian Technologies, Allianz Corn Hill, Geotran Technologies, Global data systems, Sai BPO, i-Dynamics, etc.

3.8. DATA COLLECTION

A structured questionnaire is the main tool used for collecting quantitative primary data. It enables quantitative data to be collected in a standardized way so that the data are internally consistent and coherent for analysis. Also the questionnaire ensures standardization and comparability of the data across interviewers, increases speed and accuracy of recording, and facilitates data processing. The scaling techniques used in the development of questionnaire used in the study are: nominal scale, Likert type scale under interval scale, itemized rating and rank-order scale under ordinal scale and word association under disguised structured scale.

Renis Likert type 5 point scale was used to convert qualitative nature of the data into quantitative type. The respondents are asked to indicate their degree of agreement by checking one of five response categories. The data are typically treated as interval scale. When using this approach to determine the total score for each respondent on each store, it is important to use a consistent scoring procedure so that a high (or low) score consistently reflects a favorable response. This requires that the categories assigned to the negative statements by the respondents be scored by reversing the scale. Note that for a negative statement, an agreement reflects unfavorable response,
whereas for a positive statement, agreement represents a favorable response. Accordingly, a strongly agree response to a favorable statement and a strongly disagree response to an unfavorable statement would both receive scores of five. Each respondent’s total score for each store is calculated. A respondent will have the most favorable attitude toward the store with the highest score. It is easy to construct and administer this scale, and it is easy for the respondent to understand (Rajiv Grover Marco Vriens, 2006).

### 3.8.1 Collection of Primary Data
The primary data required for the study have been collected from select employees working in BPO organizations located in Karnataka and Kerala. The primary data collection is done in two stages. In the first stage, a well structured questionnaire has been developed and pre-testing of the questionnaire has been done by choosing 50 employees (respondents) from different levels of 5 BPO organizations on a random basis from Karnataka and Kerala states. Reliability analysis for the questionnaire used in the present study has been done with a sample of 50 respondents and found that the reliability is good. A final questionnaire (attached in the appendix-1) with 40 statements (proposed employee attrition factors) has been prepared and was administered to the target respondents. The designations of the employees covered under the study are: process analyst (entry level), senior process analyst, team leader, supervisor and manager (division head).

In the second stage, primary data has been collected by conducting an expert opinion survey using interview schedule developed separately for the samples selected from Karnataka and Kerala states. The respondents chosen includes experts and higher officials of the department of Information and Technology (Government) and industry experts involving senior HR managers, division heads and HR specialists in various BPO and IT companies. Also, personal discussions and deliberations with BPO employees starting from process analyst to senior managers’ level have been conducted to collect the required data.

### 3.8.2 Secondary data Collection
The secondary data related to the study are collected from different sources including text books, articles published in journals, news papers, periodicals National Association of Software Companies (Nasscom) websites, Mckinsey study reports
company websites, government’s IT department sites doctoral research thesis and various other related sites.

3.9 DATA ANALYSIS TECHNIQUES
Data analysis involves converting a series of recorded observations into descriptive statement and/ or inferences about relationships. For the Statistical analysis of the data used in the present study, the major tools used includes: Factor Analysis, Multiple Regression analysis, Analysis of Variance (One-way ANOVA), Chi-Square test, t-test, pie-charts, averages, percentages graphs, bar diagrams and SPSS software packages.

3.10 ANALYSIS AND INTERPRETATION
Factor analysis has been used here to identify and define the underlying dimensions in the original variables and is used to reduce the number of variables by eliminating redundancy.

3.10.1 Factor Analysis
The general purpose of factor analysis is to find a method of summarizing the information contained in a number of original variables into a smaller set of new composite dimensions (Factors) with minimum loss of information. That is, the Factor Analysis tries to identify and define the underlying dimensions in the original variables.

Factor analysis usually proceeds in four steps:
1. First, the correlation matrix for all variables is computed. Variables that do not appear to be related to other variables can be identified from the matrix. The appropriateness of the factor model can also be calculated.
2. Factor extraction, the number of factors necessary to represent the data and the method of calculating them must be determined. At this step, how well the chosen model fits the data is also ascertained.
3. Rotation focuses on transforming the factors to make them more interpretable.
4. Scores for each factor can be computed for each case. These scores are then used for further analysis.
The set of 40 items included in the Employee Attrition Scale was used to find the underlying factors in it. Identified 13 factors affecting high employee through factor analysis and a 13 factors model was developed.

Analysis of variance (One-way ANOVA), Chi-Square test, and t-test are done on the primary data. Also relevant interpretations of the tables and other data have been done using pie-charts, percentage diagrams and bar diagrams.

Analysis of the respondent’s personal and other relevant factors namely gender, location of the respondents, global position (multination/national), age, experience in the present organization, respondent’s salary, designation, qualification, area of work, number of training programs undergone have been done and percentage charts are prepared and interpretation also is given for the above factors. Also ranking of reasons for stress to BPO employees is done with suitable charts. Multiple regression analysis was applied to find the critical factors and the non-critical factors or variables which might affect the attrition of the employees.

3.11 FIELD SURVEY-AREA OF THE STUDY

The whole study covers a period of five years from 2005-2010.

3.12 LIMITATIONS OF THE STUDY

Being a management research, the study is not free from limitations. While conducting this study, the following were the limitations that were faced:

1. Since the study involves use of primary data for drawing inference, the coverage of the study has been limited to the two states Karnataka and Kerala.

2. Lack of sincere cooperation from few BPO organization’s management in allowing the data collection which lead the researcher to adopt mainly quota sampling.

3. Inability to meet all the respondents personally.

4. Lack of sufficient time for the respondents to answer sincerely all the questions due to their work pressure and stressful environment.

5. Respondent’s inability to answer the questions considering all the view points.