Chapter 4

METHODOLOGY OF THE STUDY

4.1 Research Hypotheses

The present study aims at understanding the feeling of empowerment on employees working in service sector, specifically in banks. This study examines the relationship between psychological empowerment and job satisfaction, psychological empowerment and job related stress; and job satisfaction and job related stress. Specifically the relationship between all the dimensions of psychological empowerment and job satisfaction were also investigated in the study. Present research is exploratory in nature. The relationships between the aforementioned variables were presumed and appropriate hypotheses were formulated for testing. The hypotheses formulated, definitions of variables, population of the study, tools for data collection, method of data collection, tools used for data analysis etc. are detailed in this chapter.

4.1 Research Hypotheses

Based on the information gathered during review of literature various hypotheses were formulated presuming different relationship among the different variables of the study such as psychological empowerment, job
satisfaction and job related stress. Some hypotheses were formulated for assessing the overall relationship between psychological empowerment and other two variables whereas other hypotheses were stated to assess the relationships between various dimensions of psychological empowerment and job satisfaction. The relationship between the demographic variables and psychological empowerment were also looked into with the help of some hypotheses.

The various hypotheses formulated are as follows:

H1 : Higher the level of Psychological Empowerment higher will be the level of Job Satisfaction

H2 : Higher the level of Psychological Empowerment lower will be the level of Job Related Stress

H3 : Higher the level of Job Satisfaction lower will be the level of Job Related Stress

H4 : The four dimensions of Psychological Empowerment are positively related to Job Satisfaction.

H4a : Meaning dimension of Psychological Empowerment is positively related to Job Satisfaction

H4b : Competence dimension of Psychological Empowerment is positively related to Job Satisfaction

H4c : Self-determination dimension of Psychological Empowerment is positively related to Job Satisfaction

H4d : Impact dimension of Psychological Empowerment is positively related to Job Satisfaction.
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H5 : Job Satisfaction mediates the relation between Psychological Empowerment and Job Related Stress.

H6 : Psychological Empowerment differs among employees of different sectors of banks.

H7 : Dimensions of Psychological Empowerment (Meaning, Competence, Self-determination and Impact) differs among employees of different sectors of banks.

H8 : Psychological Empowerment differs among employees of different banks.

H9 : There exists a relationship between age and Psychological Empowerment.

H10 : There exists a relationship between education and Psychological Empowerment.

H11 : There exists a relationship between level of employees and Psychological Empowerment.

H12 : There exists a relationship between gender and Psychological Empowerment.

4.2 Variables of the study and Operational Definitions

Three variables, Psychological empowerment, Job satisfaction and Job related stress were determined after a thorough review of literature. There are several definitions for the terms but the following definitions will be considered for the purpose of this study.

Psychological Empowerment:

Psychological empowerment is a psychological mindset that includes the fit between one’s job and personal values. It is the belief that one has necessary knowledge and skills to perform the job well that can make a difference in the organization (Sprietzer, 1995a).
Thus for the purpose of this study psychological empowerment is defined as an individual’s experience of intrinsic motivation that is based on four cognitions (meaning, competence, impact and self-determination) about an employee in relation to his or her work role (Spreitzer, 1995a) and psychological empowerment is operationally taken in the study as the scores obtained by the respondent on Spreitzer’s Psychological Empowerment Scale.

**Job Satisfaction:**

An affective or emotional reaction to a job that results from the incumbent’s comparison of actual outcomes with those that are desired (Cranny, Smith and Stone, 1992). For the purpose of this study, job satisfaction is operationally defined as a subjective quality that is measured in the form of an overall job satisfaction score on the Minnesota Satisfaction Questionnaire (MSQ) short form.

**Job Related Stress:**

Stress refers to the resultant behavioural, physical or psychological changes that occur when there is a mismatch between the person and his environment. Job Related Stress is the harmful physical and emotional responses that occur when the requirements of the job do not match the capabilities, resources, or needs of the worker (Sauter et al., 1999). Job Related Stress is operationally taken in the study as the scores obtained by the respondents on the Job Related Tension Index (JRTI).

**Banking Sector:**

Banking Sector refers to the banking industry which comprises of various types of banks belonging to different sectors such as private sector, public sector etc. For the purpose of the study banks were chosen from three different sectors and they are private sector banks, public sector banks and new generation banks.
4.3 Population of the study

The present study is carried out with an intention to understand the nature of relationship that exist between the variables, psychological empowerment, job satisfaction and job related stress among the employees belonging to clerical and managerial cadre in various banks. Hence the population of the study includes all branch level employees working in clerical and managerial cadre of various banks in Kerala.

4.4 Sample Design and Sample Selection

Choosing banks for data collection was a complex task. Considering various aspects the researcher decided to employ the concept of multi stage sampling for the present study. At the first stage the researcher decided to choose three groups of banks from the whole banks for the study, considering the different features of the three groups of banks. They were private sector banks, public sector banks and new generation banks.

At the second stage two banks each from each group of the above banks were chosen considering the chances to access data from the banks. The banks were Federal bank and south Indian bank from private sector banks, State bank of India and state bank of Travancore from public sector banks and HDFC and IDBI from new generation banks. At the third level ten branches from each banks (60 branches) were chosen through lottery method for data collection. Researcher finally collected 337 sample from the employees of the afore mentioned branches. Since the banks have their own restrictions and rules which prevent the researcher to collect information from all the employees of the branch, the sample was restricted to available and permitted employees. Table 4.1 shows the composition of each bank.
Table 4.1 Showing the classification of sample

<table>
<thead>
<tr>
<th>Sector</th>
<th>Banks</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private Sector</td>
<td>South Indian Bank</td>
<td>32</td>
<td>9.5</td>
</tr>
<tr>
<td></td>
<td>Federal Bank</td>
<td>73</td>
<td>21.7</td>
</tr>
<tr>
<td></td>
<td>State Bank of India</td>
<td>42</td>
<td>12.5</td>
</tr>
<tr>
<td>Public Sector</td>
<td>State Bank of Travancore</td>
<td>71</td>
<td>21.1</td>
</tr>
<tr>
<td>New Generation</td>
<td>IDBI</td>
<td>52</td>
<td>15.4</td>
</tr>
<tr>
<td></td>
<td>HDFC</td>
<td>67</td>
<td>19.9</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>337</td>
<td>100.0</td>
</tr>
</tbody>
</table>

4.5 Instruments used for Data Collection

There were three important variables namely psychological empowerment, job satisfaction and job related stress in the study. Standardised tests with proven validity and reliability were administered among the respondents for assessing the above mentioned variables. The tests used are given below.

- Psychological empowerment is measured using a 12-item scale developed by Spreitzer (1995a).
- Job Satisfaction is measured using the Minnesota Satisfaction Questionnaire short-form (Weiss, Cavis, England and Lofquist, 1967).
- Job Related Stress is measured by Job Related Tension Index (JRTI) developed by Kahn et al. (1964).

In addition to the above, a small schedule was used to collect the demographic details of the respondents. A pilot study was conducted to check the reliability of the tests, to assess the adequacy of the instructions and to measure the time needed to complete the survey. Cronbach’s alpha was used to assess the reliability of all the three tests used for the pilot study and the same
was found to be very high for all the three tests. The Cronbach’s alpha for the tests used for Psychological empowerment, Job satisfaction and Job related stress were 0.78, 0.91 and 0.86 respectively. The details are demonstrated in Table 4.2. Each instrument and their explanation are as follows:

4.5.1 Spreitzer’s Psychological Empowerment Instrument

Psychological empowerment was measured using a 12-item scale developed by Spreitzer (1995a). The scale is composed of four subscales: meaning, competence, self determination, and impact. Each of the sub scales has three items each. Sample items were ‘The work I do is very important to me’ (Meaning), ‘I am confident about my ability to do my job’ (Competence), ‘I have significant autonomy in determining how I do my job’ (Self-determination), and ‘My impact on what happens in my department is large’ (Impact). Respondents were asked to indicate their level of agreement or disagreement on each item on a five-point scale ranging from 1 (strongly disagree) to 5 (strongly agree). This is a popular test and it is widely used in Indian studies. Cronbach’s alpha of the entire scale was 0.78. Cronbach’s alpha for the subscales were 0.72 for meaning, 0.75 for competence, 0.75 for self-determination, and 0.85 for impact. Based on Spreitzer’s (1995a) explanation that these four sub facets additively create the psychological empowerment, the subscale scores were averaged to obtain a total score for psychological empowerment. A higher score indicated greater perceived empowerment.

4.5.2 Minnesota Satisfaction Questionnaire (MSQ) Short Form

Job satisfaction was measured using the short form of the Minnesota Satisfaction Questionnaire (MSQ) which was designed by Weiss, Dawis, England, and Lofquist (1967) to investigate employees' satisfaction with their jobs. There were three kinds of forms about the MSQ, including two long forms (1967 and 1977 version) and a short form (1967). MSQ short form by the
Vocational Psychology Research in the University of Minnesota, 1967 was a 20-item scale. Lo (2003) pointed out that the short-form MSQ consists of three scales: general satisfaction, intrinsic satisfaction, and extrinsic satisfaction. Houser and Chace (1993) explained that out of 20 items in MSQ, 12 items were the intrinsic scale which measured the job achievement opportunities and opportunities to do things for others, 6 items were the extrinsic scale which measured company policies and the quality of working conditions. The other two items were included in the general satisfaction scale, but not related to either the intrinsic scale or the extrinsic scale.

The intrinsic satisfaction scale measures an individual's satisfaction with internal factors on the job. The extrinsic satisfaction scale measures satisfaction with an individual's external job factors of the job. MSQ short form asked respondents to indicate how they felt about different aspects of their job like ‘being able to keep busy all the time’, ‘the chance to do things for other people’ etc. Respondents were asked to rate each item on a five-point scale ranging from 1 (very dissatisfied), 2 (dissatisfied), 3 (neither satisfied nor dissatisfied), 4 (satisfied), and 5 (very satisfied). Cronbach’s alpha for the scale is tested and found to be 0.91. This scale has extensively been used for measuring job satisfaction in Indian context.

4.5.3 Job Related Tension Index (JRTI)

Job related tension index (JRTI) developed by Kahn, Wolfe, Quinn and Snoek (1964) was used to measure the job related stress. The JRTI was developed and used in a national survey that examined stress in 53 different jobs (Kahn et al., 1964). This tool provides a general measure of job tension that arises from the social environment of the work place.

This scale evaluate psychological indications of stress, such as feeling of over burdened with work, not having the adequate resources and tools to
complete given tasks or projects, and usually being incapable to handle all of the work. The theoretical framework that forms the basis for this measure proposes that role conflict and role ambiguity result in job stress and tension (Kahn et al., 1964). JRTI has also been used in studies with male, upper-middle managers (Roger, 1977) and also various nursing department studies (Bateman et al., 1983). Roger (1977) identified that JRTI contains four factors that accounted for 10% of the variance in stress. The four factors are management responsibilities work load, organizational structure and design and communication ad interpersonal interactions.

The job related tension index is a 17 item scale. It measures the stress on a five point Likert scale from 1=strongly disagree to 5= strongly agree. The index score is determined by adding the responses. Higher scores indicated higher perceived occupational stress. This test has been used in many Indian studies to measure the job stress. Cronbach’s alpha of JRTI has been tested and found to be 0.86.

<table>
<thead>
<tr>
<th>No of Variables</th>
<th>Type of Scale</th>
<th>Cronbach’s alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Likert-5</td>
<td>0.715</td>
</tr>
<tr>
<td>3</td>
<td>Likert -5</td>
<td>0.745</td>
</tr>
<tr>
<td>3</td>
<td>Likert -5</td>
<td>0.746</td>
</tr>
<tr>
<td>3</td>
<td>Likert -5</td>
<td>0.852</td>
</tr>
<tr>
<td>12</td>
<td>Likert -5</td>
<td>0.783</td>
</tr>
<tr>
<td>17</td>
<td>Likert -5</td>
<td>0.856</td>
</tr>
<tr>
<td>20</td>
<td>Likert -5</td>
<td>0.908</td>
</tr>
</tbody>
</table>

4.6 Demographic Characteristics

Demographic data were requested from each respondent in order to analyse their relationship with major variable. Respondents were asked questions relating to their age, gender, educational level and designation. Questions were also asked
to indicate how long they have been in the concerned banks. A couple of hypotheses were also formulated to test the relationship between some of the demographic variables and psychological empowerment.

4.7 Method of Data Collection

The data were collected using hand delivery method. The investigator visited all the 60 randomly selected bank branches and administered the survey instruments to the employees. Respondents were given appropriate instructions regarding how to go about with the tests and method of marking their responses without any error.

4.8 Techniques of Data Analysis

The data analysis was based on the research objectives formulated for the study. The Statistical Package for Social Science (SPSS) was used for most of the statistical analysis. Descriptive statistics were calculated for the overall population for each of the variables. Mean and Standard deviations were determined for each variable in the study. Cronbach’s alpha was used to measure the internal consistency and reliability of the instrument.

To explore the relationship between independent and dependent variables, various statistical methods like Percentage analysis, Cross tabulation, Pearson Correlation, Chi square- test of Independence, Z test, One way ANOVA and Post-Hoc test were used. The box plot has also been used to depict the distribution of responses. The researcher mainly focused on the substantiation of the hypothetical model of relationship among the employees’ psychological empowerment, job satisfaction and job related stress. Structural Equation Modeling (SEM) has been used for testing the proposed research model that explains the relationship between the Psychological Empowerment, Job Satisfaction and Job Related Stress among bank employees. The statistical methods used are elaborated here.
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a) Pearson Correlation

Pearson correlation is a calculation that examines the relationship between two variables. Pearson’s correlation coefficient is the average product of the deviation scores for two variables, divided by the product of their standard deviation (Freed, Ryan and Hess (1991). The correlation coefficient was found between psychological empowerment and job satisfaction, psychological empowerment and job related stress and also job satisfaction and job related stress. Pearson’s correlation was also computed between psychological empowerment, job satisfaction, psychological empowerment and job related stress in three different sectors of banks. The relation between job satisfaction and the cognitions of psychological empowerment, meaning competence, self-determination and impact was also examined using Pearson’s correlation coefficient.

b) Mean percentage Score

Mean percentage score was calculated to identify the level of psychological empowerment of different sectors of banks. The formula for calculating the mean percentage score is

\[
MPS = \frac{\text{Mean score of the variable} \times 100}{\text{Maximum possible score}}
\]

c) Chi-square test of Independence

To test the hypothesis that two attributes are associated or not the Chi-square test is used for independence. \( \chi^2 \) is defined as

\[
\chi^2 = \sum \frac{(O - E)^2}{E}
\]

where \( O \) refers to the observed frequencies and \( E \) for the expected frequencies (the ratio of the product of the row total and column total to the grand total). Chi-square analysis were performed to determine
whether there is any relation between psychological empowerment and job satisfaction; psychological empowerment and job related stress; and also job satisfaction and job related stress.

d) **Z test**

Z Test procedure compares means for two groups. Ideally, for this test, the subjects should be randomly assigned to two groups, so that any difference in response is due to the treatment (or lack of treatment) and not due to other factors. Z test is conducted to find out whether gender (male or female) has any relationship with the level of psychological empowerment. The formula for conducting Z test is

\[
Z = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{s_1^2/n_1 + s_2^2/n_2}}
\]

e) **One-Way ANOVA**

The One-Way ANOVA procedure produces a one-way analysis of variance for a quantitative dependent variable by a single factor (independent) variable. Here analysis of variance is conducted to examine the effects of demographic variables like age, educational level and level of employees and on the dependent variable psychological empowerment. One way ANOVA was also conducted to find out which dimensions of empowerment differed among the banking sector.

f) **Post Hoc Test**

In addition to determining that differences exist among the means, to know which means differs, Post hoc test was conducted. Post hoc test was conducted to identify whether there is significant difference in the psychological empowerment sector wise as well as bank-wise. Post Hoc test was also conducted to find out which age-group had significant difference in the empowerment.
g) Structural Equation Modeling

Structural Equation Modeling (SEM) is a multivariate statistical procedure that is used to test how well the measured variables represent the number of constructs. Here CFA is conducted to test the fit between the research model (given in Chapter 1) and the obtained data. SEM is used in this study to test the proposed research model showing the relationship between psychological empowerment, job satisfaction and job related stress. Further Sobel test was also conducted.

This chapter discussed the procedure of the survey and the outline of statistical analysis. This included research design, hypothesis, population, sample design and sample, instrumentation, procedure for data collection and tools used for data analysis.