

CHAPTER IV

RESEARCH DESIGN

The present chapter is devoted to describe the method of sample selection, instrument designing, procedure and statistical techniques used to achieve the objectives of the study.

The present study was exploratory and descriptive in nature. Unit of analysis considered for the study is ‘individuals’ in the capacity of employees working in various insurance companies in Mysore district. The study is based on both primary and secondary data. The primary data was collected with help of self administered questionnaire. The first part of the questionnaire relates to demographic variables like, gender, marital status, age, educational qualification, ownership of the company, type of insurance company, experience in the organisation and monthly salary. Second part of questionnaire relates to quality of work life and third part of the questionnaire relates to employee engagement. Based on literature survey various factors were identified to measure the quality of work life and employee engagement. Statements of the questionnaire were well structured with 5 point Likert’s scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The secondary data was collected with the help of published sources such as text books, journal articles, research articles from web sites, IRDA journals, annual reports and thesis submitted to universities.

4.1 SAMPLING DESIGN

The sample size was primarily designed to be 30% of the population. Stratified random sampling method was used to select the sample respondents. The entire population was divided in to four groups which are mutually exclusive (means if an element belong to one stratum, it cannot belong to any other stratum). From each group on an average 30% of the population were selected as sample respondents. Details of sampled insurance companies are given in table 4.1

Table 4.1 Sampling Design

Sl. No.	Public/private insurance co.	Total number of employees	Number of employees selected	Percentage of sample respondents
1	Public life insurance company	369	113	30.62%
2	Public Non-life Insurance Company	184	56	30.43%
3	Private Life insurance Co.	329	102	31%
4	Private Non Life Insurance co (including Health Insurance)	217	65	29.95%
Total		1,099	336	30.57%

(Source: Survey data)

In order to tackle the non-responses, 457 questionnaires were distributed. Out of which 342 employees were responded to the questionnaire. After eliminating cases with missing data, the final sample size consisted of 336 useable responses.

4.2 INSTRUMENT DESIGN

Based on the extensive literature survey conducted for the present study, 110 statements were developed to measure quality of work life and employee engagement. A questionnaire containing 98 questions was finalised to ascertain the perceptions of insurance company employees on QWL and Employee Engagement. After conducting factor analysis out of 98 statements, 23 statements were deleted (statements factor loadings which were less than 0.4). Finally, 75 item questionnaire was used for the present study and the same is provided in Appendix A. The factor loadings for 75 questions presented in table no. 4.4. The questionnaire contains three sections as detailed below. Section I was meant for knowing about the personal profile of the employees. Section II contains 58 statements (question number 1 to question number 58), which is

meant for quality of work life measurement, and Section III consists of 17 statements (question number 59 to 75) to measure employee engagement. Construction of the items (QWL statements) in the scale is based on the work done by Saklani(2003), Taylor (1979), Warr (1999), Mirvis and Lawler (1984), Baba and Jamal(1991) and Sirgy et al (2001). Initially total 26 dimensions were identified to measure quality of work life namely Adequate and fair compensation, Fringe benefits, Welfare measures, Rewards, Recognition, Nature of job, Work load, Nature of job, Career growth, Turnover intentions, Training and development, Promotions, Safe and healthy working environment, Reputation of the organisation, Work group relations, Relation with boss, Relation with union, Interpersonal relationship, Time for family and social obligations, Time for pursuing hobbies and other life interests, Participation in decision making, Equitable treatment, Grievance handling, Role ambiguity, High target, and Employee motivation. Various dimensions and items constituting the scale have sufficient literature support. Many of these dimensions have already been used by researchers in the Indian context also. Employee engagement scale items are based on the work done by Robinson. D, Perryman and Hayday (2004). All statements are scored on a five-point likert scale ranging from one (Strongly Disagree) to five (Strongly Agree). There are no negative statements in the questionnaire.

4.2.1 PILOT STUDY

Before carrying out the main study, a pilot study was conducted to assess the reliability of the instrument using Cronbach's Alpha and also to ascertain the viability of the data collection. 50 respondents were selected from a population similar to those who were surveyed in the main study. These respondents were working in the various insurance companies located in Mysore district.

4.2.2 RELIABILITY AND VALIDITY OF THE SCALE

The data collected from the pilot study were subjected to reliability test. Cronbach's Alpha was used to check the reliability of the scale. The reliability coefficient alpha values are given in the following table.

Table 4.2 Reliability Statistics

Variables	Cronbach's Alpha	No. of Items
QWL-Factor 1: Basic factors	0.937	14
QWL-Factor 2: Organisational factors	0.714	14
QWL-Factor 3: Job satisfaction	0.897	16
QWL-Factor 4: Competency development and opportunity to use skills	0.803	14
QWL – Overall scale	0.952	58
Employee engagement	0.963	17

(Source: Survey data)

The reliability test results show that the questionnaire designed for the present study is reliable with respect to all the six sections. So, the pilot study results showed that the constructs alpha coefficients had an acceptable level which is greater than 0.70, which is considered as highly sufficient.

4.2.3 EXTRACTION OF QWL FACTORS USING FACTOR ANALYSIS

In order to determine factors which influence the quality of work life and employee engagement in insurance industry 75 statements were prepared. To reduce into major dimensions, factor analysis using Principal Component Analysis with Varimax Rotation is applied. The following table shows that the results of KMO Bartlett's Test.

Table : 4.3 Results of KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.924
Approx. Chi-Square		25437.000
Bartlett's Test of Sphericity	df	2926
	Sig.	0.000

(Source: Compilation of primary data using SPSS)

The table 4.3 shows Kaiser –Meyer-Olkin (KMO) measure of sampling adequacy for the individual variables is studied. The KMO calculated is found to be 0.924. This score indicates that the sample size is good enough for the study. And overall significance of correlation matrices was tested with Bartlett's Test of Sphericity which proved to be highly significant. It indicates valid inter correlations between the items and proved goodness of fit to the data. The factor loading with Varimax Rotation for QWL

was done to investigate the underlying relationships of a large number of items and to determine whether they can be reduced to a smaller set of factors. This analysis has a high potential to inflate the component loadings. Thus, a higher rule-of-thumb, a cut off value of 0.40 is adopted (Nunnally and Berstein, 1994). Kaiser-Meyer-Olkin measure of sampling adequacy and Bartlett's test of Sphericity are used to determine the appropriateness of factor analysis. Eigen values greater than one is considered significant. All the factors with latent roots less than 1 are concluded to be insignificant and ignored. The results of exploratory factor analysis and factor loadings are presented in the table 4.4, table no. 4.5, table 4.6 and table number 4.7.

4.2.3.1 QWL Factor 1: Basic factors

Basic factors are essential in promoting a climate of involvement and career satisfaction. Today's organisations need to be more flexible so that employees are equipped to develop their workforce and enjoy their commitment. Basic factors enhance the level of quality of work life of employees that will leads to employee engagement. Employees were asked to respond to a set of 14 statements on a five point Likert's scale, on the basis of degree of importance given by them to each statement. These facets of Basic factors include the following:

1. Adequate salary
2. Benefits
3. Rewards and recognition for good performance
4. Work life balance

Table 4.4 Results of exploratory factor loadings for QWL Factor 1: Basic Factors

Sl.No	Variables	Factor Loadings
1	Adequate Salary And Benefits	
	Q1	0.931
	Q2	0.931
	Q3	0.919
	Q4	0.893
	Q5	0.832

2	Work Life Balance	
	Q6	0.896
	Q7	0.885
	Q8	0.804
	Q9	0.759
3	Rewards And Recognition	
	Q10	0.9
	Q11	0.889
	Q12	0.832
	Q13	0.791
	Q14	0.78

(Source: Survey data)

Suitable 14 statements were framed to measure the above facets of work. Based on the scoring obtained, the total score for each respondent and the average score for each variable were calculated. Scores of the employees whose total scores were between 56-70 were placed in “High Level of satisfaction towards Basic factors” category, scores between 28-55 were placed in “Moderate Level of satisfaction towards Basic factors” category and scores below 28 were considered in “Low level of satisfaction towards Basic factors” category.

4.2.3.2 QWL Factor 2: Organisational factors

Employees were asked to respond to a set of 14 statements on a five point likert’s scale, on the basis of degree of importance given by them to each statement. The following factors were considered to measure organisational factors.

- a. Working environment
- b. Relationship with supervisor and subordinates
- c. Fairness in the company procedures and policy concerning all employees
- d. Organisational policies towards responsive grievance handling
- e. Organisational policies towards authority given to employees to perform job

Suitable 14 statements were framed to measure the above facets of work. Based on the scoring obtained, the total score for each respondent and the average score for each variable were calculated. Scores of the employees whose total scores were between 56-70 were placed in “High Level of satisfaction towards organisational factors” category, scores between 28-55 were placed in “Moderate Level of satisfaction towards organisational factors” category and scores below 28 were considered in “Low level of satisfaction towards organisational factors” category. The table 4.5 showing the results of exploratory factor loading for QWL factor 2.

Table 4.5 Results of exploratory factor loadings for QWL Factor 2: Organisational Factors

Sl.No	Variables	Factor Loadings
1	Working Environment And Relationship With Supervisor	
	Q15	0.612
	Q16	0.626
	Q17	0.64
	Q18	0.647
	Q19	0.662
	Q20	0.682
	Q21	0.687
	Q22	0.708
	Q23	0.723
2	Organisational Policies	
	Q24	0.746
	Q25	0.713
	Q26	0.686
	Q27	0.684
	Q28	0.503

(Source: Survey data)

4.2.3.3 QWL Factor 3: Job Satisfaction

Job satisfaction and quality of work life are interrelated. When the employees are satisfied with their job then there is better quality of work life and vice versa. If the employees are satisfied with the other physical, psychological and social aspects of the job then the employees will possess job security and will be satisfied with their job.

Employees were asked to respond to a set of 16 statements on a five point Likert's scale, on the basis of degree of importance given by them to each statement. The following factors were considered to measure the job satisfaction.

- a. Nature of work
- b. Job security
- c. Job stress
- d. Satisfaction towards the job
- e. Satisfaction towards the work load

Suitable 16 statements were framed to measure the above facets of work. Based on the scoring obtained, the total score for each respondent and the average score for each variable were calculated. Scores of the employees whose total scores were between 64-80 were placed in "High Level of job satisfaction" category, scores between 32-63 were placed in "Moderate Level of job satisfaction" category and scores below 32 were considered in "Low level of job satisfaction" category.

Table 4.6 Results of exploratory factor loadings for QWL Factor 3: Job satisfaction

Sl.No	Variables	Factor loadings
1	Nature Of Work Job Security	
	Q29	0.819
	Q30	0.798
	Q31	0.743
	Q32	0.725
	Q33	0.692
	Q34	0.675
	Q35	0.661
	Q36	0.639
2	Satisfaction Towards The Job And Work Load	
	Q37	0.865
	Q38	0.821
	Q39	0.782
	Q40	0.741
	Q41	0.739

	Q42	0.664
	Q43	0.663
	Q44	0.62

(Source: Survey data)

4.2.3.4 QWL Factor 4: Competency development and opportunity to use skills

Companies can improve employees' quality of work life by creating learning environment. Sufficient opportunities for training and development and promotional opportunities, will lead to enhancement of quality of work life. Employees were asked to respond to a set of 14 statements on a five point Likert's scale, on the basis of degree of importance given by them to each statement. The following facets were considered to measure competency development and opportunity to use skills of an employee.

- a. Promotional opportunities available in the company.
- b. Performance appraisal system in the company
- c. Opportunity to learn new things
- d. Training and development programmes
- e. Decision making

Suitable 14 statements were framed to measure the above facets of work. Based on the scoring obtained, the total score for each respondent and the average score for each variable were calculated. Scores of the employees whose total scores were between 56-70 were placed in "High Level of satisfaction towards competency development" category, scores between 28-55 were placed in "Moderate Level of satisfaction towards competency development" category and scores below 28 were considered in "Low level of competency development" category.

Table 4.7 Results of exploratory factor loadings for QWL Factor 4: Competency development and opportunity to use skills

Sl.No	Variables	Factor Loadings
1	Promotional Opportunities And Performance Appraisal	
	Q45	0.811
	Q46	0.703
	Q47	0.655
	Q48	0.596
2	Employee Development	
	Q49	0.834
	Q50	0.797
	Q51	0.774
	Q52	0.725
	Q53	0.715
	Q54	0.708
	Q55	0.685
	Q56	0.606
	Q57	0.597
	Q58	0.557

(Source: Survey data)

4.2.3.5 Overall Level of Quality of work Life

The quality of work life is a multi dimensional concept. The present study takes into account basic factors, organisational factors, job satisfaction and competency development as the four major dimensions of quality of work life to find out the levels of quality of work life as perceived by insurance company employees. The efforts an employee takes to do the work will be moderated by basic job factors, organisational factors, job satisfaction and competency development factors. Employees were asked to respond to a set of 58 statements on a five point Likert's scale, on the basis of degree of importance given by them to each statement. Based on the scorings obtained, the total score for each respondent and the average score for each variable were calculated. Scores of the employees whose total scores were between 232-290 were placed in "High Level of QWL" category, scores between 116-231 placed in "Moderate Level of QWL" category and scores below 116 were considered in "Low level of QWL" category.

4.2.3.6 Overall Level of Employee Engagement

Employee engagement is all about having a psychological positive commitment towards the assigned task, which is clearly reflected in his/her dedication towards the work. To measure the level of employee engagement three components were considered, such as vigor, dedication and absorption. These components explain the features of engaged employees. Employees were asked to respond to a set of 17 statements on a five point Likert's scale, on the basis of degree of agreement given by them to each statement. Based on the scoring obtained, the total score for each respondent and the average score for each variable were calculated. Scores of the employees whose total scores were between 68-85 were placed in "High Level of Employee Engagement" category, scores between 34-67 were placed in "Moderate Level of Employee engagement" category and scores below 34 were considered in "Low level of Employee Engagement" category.

Table 4.8 Results of exploratory factor loadings for Employee Engagement Variable

Sl.No	Variables	Factor Loadings
1	Employee Engagement	
	Q59	0.937
	Q60	0.93
	Q61	0.894
	Q62	0.877
	Q63	0.874
	Q64	0.864
	Q65	0.863
	Q66	0.855
	Q67	0.852
	Q68	0.85
	Q69	0.83
	Q70	0.83
	Q71	0.823
	Q72	0.818
	Q73	0.675
	Q74	0.652
	Q75	0.463

(Source: Survey data)

4.3 DISCRIMINANT VALIDITY

Structural Equation Modeling techniques can be used to estimate discriminant validity. Discriminant validity reflects the extent to which the variables in a model are different. It is very important to assess this validity whether the constructs are interrelated. Large correlation between exogenous variables (greater than 0.80) suggest a lack of discriminant validity. Therefore it is recommended to delete one indicator from Structural Equation Modeling analysis if the value of correlation between independent variables exceeds 0.80. Because it present multi – collinearity (Holmes-Smith, Cunningham and Coote 2006). This study the values of correlation between independent variables were less than 0.80 as presented in the following table.

Table showing 4.9: Estimates of Correlation among exogenous variables in the model

Variable	Variable	Correlation value
Salary and Benefits	Work life balance	0.588
Salary and Benefits	Recognition and rewards	0.798
Salary and Benefits	Working environment	0.274
Salary and Benefits	Organisational policies	0.477
Salary and Benefits	Nature of job	0.650
Salary and Benefits	Job satisfaction	0.666
Salary and Benefits	Promotional opportunities	0.568
Salary and Benefits	Employee Development	0.400
Work life balance	Recognition and Rewards	0.541
Work life balance	Working environment	0.280
Work life balance	Organisational policies	0.399
Work life balance	Nature of job	0.637
Work life balance	Job satisfaction	0.598
Work life balance	Promotional opportunities	0.489
Work life balance	Employee development	0.450
Recognition and Rewards	Working environment	0.328
Recognition and Rewards	Organisational policies	0.494
Recognition and Rewards	Nature of job	0.670
Recognition and Rewards	Job satisfaction	0.719
Recognition and Rewards	Promotional opportunities	0.617
Recognition and Rewards	Employee development	0.442
Working Environment	Organisational policies	0.613
Working Environment	Nature of job	0.521

Working Environment	Job satisfaction	0.540
Working Environment	Promotional opportunities	0.500
Working Environment	Employee development	0.557
Organisational Policies	Nature of job	0.667
Organisational Policies	Job satisfaction	0.729
Organisational Policies	Promotional opportunities	0.663
Organisational Policies	Employee development	0.670
Nature of job	Job satisfaction	0.715
Nature of job	Promotional opportunities	0.711
Nature of job	Employee development	0.686
Jobsatisfaction	Promotional opportunities	0.789
Jobsatisfaction	Employee development	0.721
Promotional opportunities	Employee development	0.647

(Source: Survey data)

From the above table 4.9 it becomes easy to examine discriminant validity of the independent variables in the model. In discriminant validity analysis, it was found that all the nine independent variables were not larger than 0.8. The maximum correlation was between salary and benefits and recognition and reward (0.798).

4.4 STATISTICAL TOOLS USED IN THE STUDY

SPSS 21version and AMOS -18 version were used for data analysis. The following statistical tools were used to analyse the primary data.

1. **Kaiser-Meyer-Olkin** measure of sampling adequacy and Bartlett's test of Sphericity are used to determine the appropriateness of factor analysis.
2. **Exploratory factor analysis** was conducted to identify the factors which influences on quality of work life and employee engagement.
3. **Descriptive statistics** (Percentage analysis and Bar charts) was done to describe the sample in terms of their demographic characteristics.
4. **Independent sample T-test and Levene's test for equality of variances post hoc tests** were used to find out whether there is any significant differences in perception of quality of work life and employee engagement between

demographic variables such as gender(male and female), marital status(single and married), and educational qualification (Graduation and Post Graduation).

5. **One way ANOVA** test was used to find out the whether there is any significant difference in perception of quality of work life and employee engagement with the demographic variables such as age, type of insurance company, number of years experience in the organisation and monthly income.
6. **Chi-Square test** was performed to find out the association between
 - a. Demographic variables and level of quality of work life
 - b. Demographic variables and level of employee engagement.
7. **Pearson's Correlation** was used to find out the relationship between quality of work life and employee engagement.
8. **Structural Equation Modeling (SEM)** was performed in AMOS (Applied Moments of Structure) 18 to test the conceptual model of quality of work life and employee engagement.
9. Structural Equation Modeling was used to measure the relationship between independent variables in the model.
10. Structural Equation Modeling (SEM) was used to measure the impact of quality of work life on employee engagement.