

Chapter-2

Methodology

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Methodology of the Study

The chapter is covering the description of methodology through which the works have been completed. The description consists of the systematic steps adopted to carry out the investigation for achieving the stated aims and objectives (*as mentioned in the chapter-1*).

2.1 Research Design

The research design facilitates a complete guideline for data collection for yielding maximal information. In other words, a research design involves a series of rational decision making choices depending upon the various options available to the researchers. Broadly it is composed of different elements as the purpose of the study, unit of analysis, time dimension, and mode of observation, sampling design, data processing and data analysis (*Panneerselvam, 2013*). The study is undertaken for academic pursuit to examine the levels of subjective well-being among the employees of the organisation. As per the purpose of the research and in order to provide an appropriate explanation both qualitative and quantitative research objectives are considered.

The present study is qualitative but partially empirical in nature; thus by adopting the mixed design of research admixing the features satisfying qualitative and case based design.

2.2 Operational Variables and Definitions

The central focus of the study is on well-being practices and programmes initiated within NEEPCO and finally the impact of these programmes upon the employees' performance and corporation's success as a whole (*explored in chapter-3*). Hence, to carry out the study under a concrete boundary of construct, following definitions and discussions are found within the *NEPPCO Portal (2010)*-

Corporation- In general the word 'Corporation' is termed as a company or group of people authorised to act as a single entity and recognised as such in law. According to NEEPCO the word corporation means "North- Eastern Electric Power Corporation Limited" and includes Projects /Units under its administrative control."

Employee- A person appointed by the appointing authority is an employee.

Appointing Authority: In general ‘appointing authority’ belongs to a person or group of persons known as employer is having the authority to appoint. According to NEEPCO the authority empowered to make appointments to the posts under the Corporation and any other authorities duly delegated by the competent authority.

Well-Being- Refers to consequent state of feeling by employees due to compensation provided in whole or in part to workers, by their employers, to supplement their wages or salaries. Various allowances’ and work facilities provided by NEEPCO for employees’ benefits and job-satisfaction including cafeteria allowances.

Subjective Well-Being- The perception of the employees’ based on their own evaluation, regarding the given facilities and benefits by the corporation, which directly or indirectly includes positive/negative emotions, engagement, satisfaction and quality of life etc., can be termed as subjective well-being.

Physical Well-Being- Employees’ perception on state of well-being related to various welfare initiatives taken by the corporation which directly affect their physical or health related wellbeing.

Psychological Well-Being- Employees’ self judgement on the state of well-being related to motivational factors directed towards constructive work environment.

Social Well-Being- Practices followed to maintain mutual trust, respect and confidentiality irrespective of organisational hierarchal division.

Spiritual Well-Being- Presence of employee value proposition which encompasses positive energies those are transmittable to work and work-life balance.

2.3 Universe of the Study

The universe for the present research is limited to only one power sector that is North-Eastern Electric Power Corporation Limited (NEEPCO Ltd.), located in North-Eastern Region of India. The four unit of the NEEPCO is covered situated at four different states of NE-Region of India. The representatives for the data

collection also belong to one of these four units and from different employment grades that is executives, supervisors and workmen.

2.4 Questionnaire Development

The present survey is based on the questionnaire method which is developed the revision of the following books based on workplace behaviour, subjective well-being and organisational environment: (a) Robbins, Timothy & Elham (2009) “Organizational Behaviour”, (b) Singh (2008) “Organizational Development” (c) Mittal (2007), “Business Environment” (d) OECD (2013), “Better Life Initiative”(e) HH DALAI LAMA & Howard C. Cutter (1988), “The Art of Happiness”, (f) Sharma (2013) “Megaliving”, (g) Prabhupada (2012, 6th printing), “Teachings of Lord Caitanya: the Golden Avatara”, (h) Mishra, (2008), “The Study of Human Behaviour”, (i) Lulam (March, 2015) “Negotiating A Sense of Home”, (j) Osho World (March, 2015), (k) Rao (2008), “Human Resource Development”, (l) Sharma (2014) “The Quality of Kindness” and (m) Roy Choudhury & Barman (2008), Pezzottaite Journals. Moreover the preliminary interview with the Professionals of North Eastern Electric Power Corporation Limited (NEEPCO), India, is also considered for selection of the specific item contents within the questionnaire.

Thus, below the table 2.1 provides the selected items of the questionnaire (part-I) along with the managerial perspectives of the items. The items selected belong to the perceptions of employees’ related to components of holistic model of SWB.

Table 2.1 Managerial Perspective of the Items of the Questionnaire (Part-I)

Sl.No.	Selected Items of the Questionnaire	Managerial Perspectives of the Selected Items
<i>Physical Well-Being (15 items)</i>		
1.	Physical Distress	Person-Environment Fit
2.	Comfort	Fringe Benefits
3.	Functional Ability	Skills & Competencies
4.	Coordination	Job according to Physical Attribute
5.	Safe	Safety Measure
6.	Companion	Interpersonal Roles of Figurehead
7.	Usefulness	Exploring Employees’ Strength for Organisation
8.	Determination	Organisational Commitment
9.	Balance State of Body and Mind	Healthy Work-Life Balance
10.	Behaviour	Body Language

Sl.No.	Selected Items of the Questionnaire	Managerial Perspectives of the Selected Items
11.	Action	High Involvement Work Practice
12.	Endurance	Persistent Performance Level
13.	Agility	Alert to Changes within Business Environment
14.	Reaction Time	Decisional Role
15.	Enthusiasm	Job Satisfaction
<i>Psychological Well-Being (13 items)</i>		
16.	Inspiration	Motivation
17.	Clear Reasoning	Transparency
18.	Expression of Thought	Communication Skill
19.	Decision	Democratic Management Style
20.	Policies Prepared	Intellectual Skill
21.	Confidentiality	Conflict Management
22.	Organisational Strategy	Mission + Vision + Corporate Strategy
23.	Movement	Job Rotation
24.	Recognition	Acknowledging the Effort
25.	Boosting Own Insight	Personal Growth
26.	Calmness	Stress Management
27.	Intellectual & Mental Stimulation	Challenging Work Environment
28.	Fresh Attempt	Conceptual Skill
<i>Social Well-Being (13 items)</i>		
29.	Social Capital	Human Asset Management
30.	Stranger	Induction Process
31.	Trust	Employer-Employee Relationship
32.	Participatory Culture	Positive Work Culture
33.	Improvement	Organisational Development (OD)
34.	Hospitable	Socialisation
35.	Friends	Co-operation
36.	Assemblage	Recreational Activity
37.	Training Programme	Guidance Environmental Dynamism
38.	Social Function	Group Competency
39.	Welfare	Employee Welfare Measures
40.	Standard of Living	HR Maintenance
41.	Shared Goals	Twin Goals (Self + Organisational Enrichment)
<i>Spiritual Well-Being (5 items)</i>		
42.	Proud	Employee Value Proposition
43.	Recommend Others	Organisational Career Planning
44.	Prospect	Organisational Survival Strategy
45.	Confident with Monthly Expense	Organisational Effectiveness
46.	Purity	Managerial Ethics

The survey is based on the 'questionnaire method' which is developed after the selection of the contents of the questions and thus, prepared to make it more suitable for the NEEPCO and designed according to Proportional Stratified and Convenience Sampling method. The questionnaire is based on Five Point Rating Scale that is

Strongly Agree, Agree, Neutral, Disagree and Strongly Disagree. Further to relate with the real life problem, the survey questionnaire is distributed among 298 employees of NEEPCO belonging to four different power units – Agartala Gas Turbine Power Project (AGTP) Tripura, Kopili Hydro Electric Plant (KHEP) Assam, Ranganadi Hydro Electric Plant (RHEP) Arunachal Pradesh and Shillong Headquarter (HQ), Meghalaya.

2.5 Sample Design

The sample forms the heterogeneous group which consists of three cadres- Executives, Supervisors and Workmen. These cadres belong to different departments working for power sector organisation called NEEPCO. The man-power division of the collected sample(s) are as follows: -

Table 2.2 Sample Design Process

Units	Man-Power Breakup			Sum total of Man-power Break-up	Proportional Stratified Sampling = $n \div N \times \text{Manpower Breakup}$ (by taking the round figure)			Sum total of Sample Size
	E=	S=	W=		E=	S=	W=	
AGTP	E= 39	S= 25	W=69	133	E= 10	S= 06	W= 14	30
KHEP	E= 80	S = 46	W=228	345	E= 20	S = 12	W= 46	78
RHEP	E= 63	S= 49	W=266	378	E= 21	S= 15	W= 53	90
HQ	E=228	S=101	W=124	453	E= 50	S= 25	W= 25	100
Total	Population (N) = 1,318			&	Sample Size (n) at 95% CL & 5.0 CI = 298			
<i>Note: E= Executives, S= Supervisors, W= Workmen, CI=Confidence Interval, CL= Confidence Level, Sample Process described in Research Methodology by R. Pannersevam (2013)</i> <i>Source: Sample Size Calculated with Macorr Sample Size Calculator(www.macorr.com)</i>								

The above respondents' feeling or perceived levels of wellbeing have been examined under a set of demographic characteristics (*as discussed in chapter-4*) to gain an understanding of their opinions, attitudes and individual behavioural traits. The characteristics are- Department, Designation, Grade, Age, Gender, Marital Status, Family Type, Housing Type, Experience etc. Since, each cadre is more homogeneous in nature than the total sample and more or less same proportion of sampling units from each stratum is taken thus, the survey gave more precise information regarding the existing levels of subjective well-being.

2.6 Data Collection Tool (s)

Both primary and secondary sources are considered for this study. The primary data is collected based on the through the questionnaire, where, respondents' are given the questionnaire consisting of the options which are fitted to five point or Likert

Scale. The present survey produces a simple and concrete questionnaire that does not force the employees of the organisation to stand on a particular topic, but allows them to respond on a degree of agreement. The questionnaire distributed each employee and latter collected from the Human Resource Departments of each unit. The secondary data on the other hand is collected from sources:-

- ✓ Annual Reports form NEEPCO, Headquarter, Shillong
- ✓ Website of NEEPCO: <http://neepco.gov.in/neepco/#>
- ✓ Organisational Records related to corporation’s strategies, rules and policies.
- ✓ Power point presentation prepared by Professionals of NEEPCO

Therefore, the collected primary and secondary data were assimilated to finalise the findings of the study. The data is further utilised to search components related to each components of subjective well-being model to form questionnaire and latter on administered the questionnaire to employees’ working for the NEEPCO, Headquarter at Shillong, Meghalaya for pre-testing.

2.7 Pre-Testing and Factor Selection from Respondents’ Opinions

To check the efficiency and reliability of the scale, initially, the survey questionnaire was administered to sample of 150 employees’ out of 486 employees’. These 150 employees’ belongs to different grades as executives, supervisors and workmen. Among these respondents, certain responses were not incorporated due to incompleteness of the response. The sample of the study in the table 2.3 is self explanatory, followed by the table 2.4 showing the Cronbach Alpha for each of the dimension and table 2.5 portraying the selected factors for each of subjective well-being component(s) with the help of factor analysis.

Table-2.3: Sample Size

Employees Cadres	Questionnaire Administered	Questionnaire Received	Response Rate	Usable Responses	Acceptance Ratio (%)
Executives	50	15	0.3 (30%)	10	0.67 (67%)
Supervisors	50	40	0.8 (80%)	30	0.75(75%)
Workmen	50	40	0.8 (80%)	40	0.67 (67%)
Total	150	115	0.77 (77%)	80	0.69 (69%)

Below the table 2.4 showing the reliability test conducted on 80 samples for the 46 items from the components of holistic model of subjective well-being. The table reveals single measure intra-class correlation co-efficient (SMICC) and average measure intra-class correlation co-efficient (AMICC) with reliability co-efficient.

The value of SMICC provides intra-class correlation co-efficient = .187. The value of AMICC provides intra-class correlation co-efficient = .914= Cronbach Alpha = .914 explaining the high reliability of total items of the scale measuring the NEEPCO employees from Headquarter, Shillong, Meghalaya.

Table 2.4 Reliability Statistics

For Item (s)	Sample (s)	Statistics For Scale			Intra-class Correlation Co-efficient				Reliability Co-efficient (Cronbach Alpha)	Cronbach's Alpha Based on Standardized Items
		Mean	Variance Deviation	Standard deviation	Single Measure		Average Measure			
					ICC (SMICC)	Sig.	ICC (AMICC)	Sig.		
46	80	183.46	288.258	16.978	.187	.000	.914	.000	.914	.915

Table 2.5: Rotated Component Matrix (a)

Q. No.		Components			
		Physical Well-Being	Psychological Well-Being	Social Well-Being	Spiritual Well-Being
	IEV (Total) #	10.079	3.858	2.747	2.435
	IE (% of Variance) #	21.910	8.387	5.972	5.293
	RSSL (% of Variance) #	12.267	12.226	10.459	6.610
1.	Physical Distress	.784			
2.	Comfort	.751			
3.	Functional Ability	.749			
4.	Coordination	.737			
5.	Safe	.730			
6.	Companion	.636			
7.	Useful	.625			
8.	Determination	.610			
9.	Balance State Of Body & Mind	.561			
10.	Behaviour	.559			
11.	Action	.521			
12.	Endurance	.507			
13.	Agility	.489			
14.	Reaction Time	.474			
15.	Enthusiasm	.464			
16.	Inspiration		.733		
17.	Clear Reasoning		.711		
18.	Expression Of Thought		.710		
19.	Decision		.705		
20.	Policies Prepared		.664		
21.	Confidentiality		.660		

Q. No.		Components			
		Physical Well-Being	Psychological Well-Being	Social Well-Being	Spiritual Well-Being
	IEV (Total) #	10.079	3.858	2.747	2.435
	IE (% of Variance) #	21.910	8.387	5.972	5.293
	RSSL (% of Variance) #	12.267	12.226	10.459	6.610
22.	Org. Strategy		.650		
23.	Movement		.647		
24.	Recognition		.634		
25.	Boosting Own Insight		.630		
26.	Calmness		.628		
27.	Intellectual & Mental Stimulation		.609		
28.	Fresh Attempt		.481		
29.	Social Capital			.830	
30.	Strangers			.820	
31.	Trust			.817	
32.	Participatory Culture			.815	
33.	Improvement			.789	
34.	Hospitable			.734	
35.	Friends			.730	
37.	Training Program			.685	
38.	Social Functioning			.544	
39.	Welfare			.443	
36.	Assemblage			.727	
37.	Training Program			.685	
38.	Social Functioning			.830	
39.	Welfare			.820	
40.	Standard of Living			.817	
41.	Shared Goals			.815	
42.	Proud				.756
43.	Recommend Others				.736
44.	Prospect				.707
45.	Confident with Monthly Exp.				.675
46.	Purity				.646

Note: Extraction Method: Principal Component Analysis, Rotation Method: Varimax with Kaiser, Normalization. (a) Rotation converged in 6 iterations, *Items codes are the label as:*
IEV= Initial Eigenvalues,
RSSL = Rotation Sums of Squared Loadings

The table-2.5 shows the rotated component matrix (RCM) obtained through the questionnaire mode of survey on subjective well-being from NEEPCO Headquarter, located in North East India, State of Meghalaya. The questionnaire items were first fitted to factor analysis to identify newly emerged construct structure of subjective well-being items over the four components (physical well-being, psychological well-being, social well-being and spiritual well-being). For analyzing the structure of the four components, Principle Component Analysis with Varimax with Kaiser Normalization rotation method is applied which converged in 6 iterations. An attempt has been given to keep only those items in a particular component which are positively loaded, but the components which are simultaneously loaded negatively were not included.

Methodology for Data Analysis: To draw meaningful conclusion from the analysed data other statistical tools are used to fulfil the objectives. such as to evaluate the level of employees' perception upon well-being, application of statistical tools as t-test, kendall's w coefficient of concordance is implemented to measure the level of concordance, ANOVA is used to measure the degree of influence of well-being measures upon organisational environment and culture, and the nominal symmetric measure is used to test the strength and significance of antecedent factors upon the components of subjective well-being and discriminant analysis is used to focus upon the discriminating effects of organisational culture and environment upon the components of well-being.

2.8 Scope and the Factors Limiting the Study

Though the study attempts to conduct an in-depth analysis of the subject, there are certain limitations. They are:

Firstly, the study is concentrated only on one power sector organisation of India that is North-Eastern Electric Power Corporation Limited (NEEPCO Ltd.). The study would have been richer if other power sectors could be taken. But due to the time constraint, the other power sectors are not possible to cover as they are huge in size, having the power units spread out all over Indian continent and located at very interior place where it is difficult to reach and stay for a longer duration.

Secondly, the selected units of NEEPCO are also located at the remote places of the North-Eastern Region India, especially the Hydro Power Station where there are very less or no hotel or lodge facilities leading to hindrance for staying other the NEEPCO's own Guest Houses. Thus, data collection became tough as most of the time NEEPCO officers are also coming for work purpose and staying in these guest houses.

Thirdly, the some of the employees' are indifferent in nature towards the survey, tight work schedule leads, many incomplete responses, which latter on completed with the help of other employees who are more or less helpful in nature.

Thus, the above study provides the overall contour of the methodology in broad terms. The study though having certain limitations still makes the substantive level of evidence for measuring the subjective well-being of the employees' of NEEPCO. The present study also provides a holistic functional 2P+2S model furthering a discussion on organisational well-being practices in relation to the model.