CHAPTER – 2

RESEARCH METHODOLOGY

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2.1 Introduction

The objective of this chapter is to elaborate the various boundaries in terms of what has been decided to conduct this research. It includes research objectives and research questions. This chapter explains the research approach used in research study. Details of sample design, data collection design and data analysis methods are also the component of this chapter. In nut shell this chapter outlines the research plot that has been designed and followed during this research to meet the requirements of research objectives and to answer the research questions.

The literature review of various published research papers, research articles and thesis has helped in developing the content of this chapter. The ten key sections of this chapter has been planned to adequately describe the research methodology used in this research study. Section -1 is explain the i Section 2,3 and 4 describe the research objectives and research questions, research methods, research approach, research design, Section 5,6 and 7 are on sample design, data collection design, referred standard instruments and section 8,9 and 10 are about data analysis methods, research process and ethical considerations.

2.2 Research Objectives

The title of the research study explains the broad research area and scope of this study. This research is primarily intended to study the Role Efficacy and Role Stress among insurance sector employees who are working in government and private companies at Vadodara District, Gujarat, India. The specific research objectives are as follows:

i. To examine the role efficacy of managerial and executive level employees in order to give a comparative role efficacy profile of both the level.
ii. To explore correlation between role efficacy and role stress.

iii. To analyze the effect of service length at present company, total experience, age, and salary of employees on role efficacy.
iv. To calculate the stress scores of all the sample participant to locate the stress areas demanding effective stress management
v. To determine the association of role efficacy with employee's overall job satisfaction, motivation, and commitment toward organization.

2.3 Nature of Study

This research is quantitative in nature wherein the focus is on the study of role efficacy and role stress. The standard validated instruments have been used to quantify the role efficacy and role stress among the employees of private and public sector insurance companies. The research seeks to find answers of the question of how and how much (how is the role efficacy varied among public sector and private sector insurance employees? Or; how much role efficacy is associated with employee's overall job satisfaction? Or; how much role efficacy is correlated with role stress?), what (what are the stress areas that are demanding effective stress management?).

Most of the questions answered in this research are about the measurement of some or other kind. This research tries to understand the quantified effect of service length at present company, total experience, age, and salary of employees on role efficacy. It is therefore the questions in questionnaire are specific and narrow. Hence the nature of this research is quantitative. One of the key concerns of this research is the comparative exploration of employees working in public and private insurance companies with the help of 'Role Efficacy Quotient (REQ)'. This concern and the resulted REQ is essentially a result of quantitative nature.

2.4 Research Approach

The research approach that has been followed in this research is deductive approach. The deductive approach is associated with quantitative research. In deductive approach the research use a standard theory to convert a concept into measurable variables. It is therefore the researches that are based on deductive

approach include the questions in questionnaire about the theoretical concept but these questions are based on standard methods that help to measure the concept (Wilson, 2010). Usually respondents have to answer the questions by choosing from a predetermined set of options and these predetermined set of options are as per some standard method (Morgan, 2019). In this research standard method of measuring 'role efficacy' and 'role stress' that are developed and validated by Udai Pareek have been referred.

The deductive approach has been appreciated in research literature as it restrict the focus of the research on the topic that too as per a validated theory. Additionally the researcher can easily relate the finding of data analysis with the requirement of objectives because the questionnaire has been set to meet the requirements of research objectives by using a standard instrument. Many a times deductive approach has been criticized for not being open to explore the respondent and thus placing restrictions on scope of the research but at the same time it is recommended as it keep the researcher busy in drafting interpretation of close ended questions rather involving the researcher in exploring the meanings of the answers of the respondents to the open ended questions (Roberts, 2019).

2.5 Research Design

The common understanding of research design is that it is a blue print for a research study. It is a kind of work plan for a research and therefore research design explain the different kind of decisions that researcher should take to compete the research study. Literature review suggests that research design is more than the blue print of a research study or the work plan of research.

Research design ensure the collection of relevant and reliable evidences in order to give confidence and ability to the researcher to answer the questions related to research objectives with utmost clarity. In this way research design helps in solving the problems of logics with in a research. In other words it can be pointed out that the research design explains and the logical structure of the research study within the context of stated research objectives. Research design enable the

researcher to properly structure the research study by arranging all important and sub parts of research together.

The research design used for this research study is descriptive because this study gathers quantifiable data which further has been used for the detailed statistical calculation and interpretation about the respondents during data analysis (SurveyMonkey.com, 2019). By using close ended questions in questionnaire, the descriptive research design enables the researcher to appropriately measure the variable with limited options (Saunders, Lewis, & Thornhill, 2012). The descriptive research design has been criticized at many places for limiting the ability of the research in providing more detailed and distinctive insights.

Descriptive research design based studies are featured with the attempt to describe various aspects of a phenomena and the behaviour of sample respondents. Furthermore the descriptive research design deals with describing and explaining the phenomena or event related to current issues and also involved in validating research findings.

2.6 Sampling Design

Sampling is key to almost all activities performed by a human being. Sometime people do sampling deliberately and sometime sampling is used so frequently that it become a habit of daily routine. So sampling is an inescapable part of people's life and activities. Data collected from each one of the population is ideally best option but due to various limitations related with most of the research projects and research studies the complete enumeration is not possible so researchers use sampling to obtain data. Sampling design includes the details of sample size, sampling method, sampling technique, definition of sampling population and sampling units.

2.6.1 Definition of Population

A complete set of all the people or objet that have common characteristics based on some sampling criteria set by the researcher is known as population. The population in a research study represents two sets of

population. The one set is of those people that meet the criteria set by researcher and researcher is intended to generalize the findings of the research about them. This set is known as Target Population or Universe (https://www.umsl.edu, n.d.). The sub set of population that is reachable by the researcher and at the same time it is available to interact with researcher. This set is known as accessible population (https://www.umsl.edu, n.d.) or study population (Banerjee & Chaudhary, 2010) or survey population (Fricker, 2017).

In this research all the employees belong to managerial or executive level, either male or female, comes under the legal age of working, of any marital status, studied at least up to 12^{th} standard or more, involved in selling or managing insurance products of public and private companies within Gujarat state constitute target population. However the subset of above described target population working in the region of Vadodara District of Gujarat state has been considered as study population. The study population has been used to draw the sample for the study.

2.6.2 The Sampling and Sampling Units

Sampling is a statistical process of selecting a sample from the survey population for obtaining responses about research topic (courses.lumenlearning.com, n.d.). The sampling unit is an individual person or object selected for the purpose of getting responses via observation or interview method using open ended questions or by using a questionnaire of close ended questions. As apparent from the objectives of the research and explained in the definition of survey population; this research is about the study of role efficacy and role stress of employees working in insurance companies. Therefore the employee working for insurance company and meet the criterion as described in the definition of target population is taken as the sampling unit.

2.6.3 Sampling Method and Sampling Technique

This research used non-probability sampling method. One reason for this preference is related to size of target population. Other reason is the unavailability of sampling frame. Sampling frame is the list of elements of the target population from which a sample can be taken. As the research study focuses on the employees who are working in various public and private insurance companies so the sampling frame is not limited to one or two companies. In such situation it was not possible to ensure the equal chances to each element of population to be the part of the sample. Thus non-probability sampling method was used. Non probability sampling methods refers to the method that does not ensure equal chance to all the population elements to become the part of sample.

In various research studies non probability sampling methods are referred because of multiple reasons related to cost, time, sampling frame, size of target population, rareness of the population elements etc. In non-probability sampling methods sampling units are selected based on the subjective judgement and ease in accessibility. Non probability sampling is normally preferred because the method used to select the sampling unit for the sample is easier, cost effective and fast as compared to probability sampling methods.

Non probability sampling methods include following sampling techniques:

- Convenience Sampling
- Judgement Sampling
- Quota Sampling
- Snow ball Sampling

The Judgement and Quota sampling techniques are together termed as 'Purposive Sampling'.

In this research 'Judgement sampling' is used. It is also known as 'Authoritative sampling'. In this technique of sampling the selection of the sampling unit is based on a pre-determined subjective criterion. As per literature review; judgement sampling is normally used when the target population is consisting of specific elements. In this research the population

elements are the employees who are working at managerial or executive level in insurance companies. Non probability sampling techniques such as judgement sampling is used when it is intended to reveal that a specific variable (in this case role efficacy and role stress) exists in the target population (www.explorable.com, 2009).

2.6.4 Sample Size

A sample should be sufficiently large to have reasonable degree of reliability in results and it also should be able to spot the significant association or significant difference. Determining least possible size of sample to meet the requirements of research objectives is always an area of concern (Omair, 2014). A usual approach is to consider all sampling units that are available at the time of survey (Israel, 2009). Many researchers decide sample size based on the references of sample size used in previous research studies (www.explorable.com, 2009). Adequately large sample large than it might be a true representative of the target population hence such a sample size can be used to evaluate the statistical measurements of the variables. Large sample size resulted in least errors. Careful concern of a researcher about finding optimum sample size is because researcher tends to reduce the gap between the results of sample values and population values. Accuracy of sample size to better represent the population is commonly tossed with cost and time factor involved in research. Large samples are usually cost more but ensure greater accuracy while small samples are effective from cost point of view but does not ensure population representation.

If population size is more than 5000 and researcher consider plus-minus 10% margin of error then around 100 respondents would be enough for the survey however if margin of error reduced to plus-minus 5% for the same size of population then sample size increased to around 400 and a further decrease in the margin of error up to plus-minus 3% then around 1000 respondents need to be surveyed to researched about a population of more than 5000 people (Bullen, 2016).

2.6.5 Sample Size Calculator:

	Size of population					
Margin of error	>5000	5000	2500	1000	500	200
±10%	96	94	93	88	81	65
±7.5%	171	165	160	146	127	92
±5%	384	357	333	278	217	132
±3%	1067	880	748	516	341	169

Source: http://www.tools4dev.org/resources/how-to-choose-a-sample-size/

Sample size calculators are available on various surveys facilitating websites. In these sample size calculators some key information is required to fill up and then the calculator calculate the sample size in output. The target population considered in this research considered the employees of public and private insurance companies. The size of the target population is huge and exact numbers were not known. However considering the demography of Vadodara District of Gujarat state, it was assumed that the total employees working in public and private insurance companies at managerial and executive level would be around 100000. With this assumption online sample size calculator is referred to find an appropriate sample size. In the calculation confidence level was taken as 95% and the confidence interval or margin of error was considered as 8%. The final sample size in the output appeared as 150 (Sample Size Calculator, 2012) . Thus 150 respondents were finally used as sample size for this study.

The confidence level explains how sure a researcher can be in the results. In this research the confidence level was taken as 95 % which represent 95% assurance of the chance that the true % of the target population who opted for a particular answer would fall within the confidence interval. The confidence interval that has been taken in this case is 8%. let 55 % of survey respondents opted for a particular answer then the researcher can be sure that if the same question floated to everyone in the target population then same answer (that was opted by survey respondents) would have opted by minimum 47% to maximum 63% people in the target population.

2.7 Data collection

Data collection refers to the process of accumulating required data from surveying respondents and by referring already published research work and articles. The findings of a research are based on the collected data so data collection has to be planned and executed with utmost care. For this research primary data has been used and collected using questionnaire while the secondary data has been taken from various sources of published medium.

2.7.1 Type of Data used and Related Source

This research involved primary as well as secondary data. The primary data is the data that is originally collected by the researcher for the first time for specific purpose to meet the requirements of the research objectives. Whereas the secondary data is the data that has been gathered form a published source and was not collected by the researcher yet it found importance for the research topic. The secondary data may be in terms of the published content or in the form of numeric or statistical findings. In this research the secondary data in the form of content has been gathered from the published research papers, thesis, books etc. and the concerned source has been cited where ever it is used and the details of source is mentioned in the bibliography. The primary data is collected by using structured self-administered questionnaire. Self-administered questionnaire is a questionnaire that is designed by focusing the research objective and that can be filled up by the survey respondents without the intervention of the researcher.

2.7.2 Description of Questionnaire

For this research the primary data considered very important because it was essential to meet the requirement of research objectives. As such primary data is the data that has been collected by the researcher for the unique requirement of the research objectives and has been collected for the first

time. In this research primary data collection has been done by using a structured questionnaire containing close ended questions.

- **Questions about Demographic Details**

  The last part of the questionnaire contains the questions related to the demographic details of the survey participants. These questions help us to understand the composition of the sample especially when the sample is selected by using non-probability sampling method. The questions in this part were related to the professional designation, gender, age, marital status, highest level of education, salary package, total work experience etc.

- **Questions about Role Efficacy**

  The first part of the questionnaire contains the questions related to role efficacy. Question -2 contain all customary statements as described in standard role efficacy scale. There were sets of three statements in this part. Each of the statements has been named as ‘a’, ‘b’, and ‘c’. These statements are pre weighted.

- **Questions about Role Stress**

  The questions related to the role stress have been included as per the standard scale of role stress measurement. There were twelve statements and each statement has to be evaluated by using five pre-defined options. Each of these options has been given a numeric label.

2.7.3 Procedure of Questionnaire Distribution

The questionnaire has been circulated personally by visiting the place of respondent and also by mail. The responded were allowed to respond to the questionnaire by themselves without the intervention of the researcher. Since the target population of this research literate enough to answer the questions. This kind of questionnaire and questionnaire distribution is commonly called

as self-administered questionnaire distribution. Self-administered questionnaire are preferred because it control the researcher's bias to creep into data and it also allow the responded to respond more carefully. For this research the questionnaire were circulated to the people working in insurance companies at managerial or executive level.

2.7.4 Scaling Exercised

Principally there are four basic scales used in research. These are Nominal, Ordinal, Interval and Ratio scale. Nominal scale has been used for recording the responses related to the questions of demographic details of respondents. As such the questionnaire included the questions based on the standard scales for role efficacy and role stress measurement. Fundamentally role stress scale used interval scale for rating purpose. The role efficacy scale used nominal scale for the purpose of indicating options.

2.8 Reliability Testing of Role Efficacy Scale End Role Stress Scale

Variables Details

The questionnaire contains 50 variables in total. These variables are listed in variable view of SPSS-data editor. A distinctive name has been assigned to each of the variable. All of these 50 variables were numeric in nature. There were ten variables those were measured on nominal scale while remaining 40 were measured by using interval scale. In SPSS variable view the scale of these 40 were names as 'scale'. The interval scale used in role efficacy scale was pre-weighted while the role stress scale was associated with pre-determined coding values.

Cronbach's Alpha: Role Efficacy Scale

Though the reliability of the "Role Efficacy Scale" was already checked by its developer yet for this research study the reliability of the scale is evaluated by using Cronbach's Alpha Coefficient. For this evaluation the initial 50 responses were used. Following are the results of the reliability evaluation:

Table No 1: Showing the results of the Reliability Evaluation

No. of Items	Mean	Std. Deviation	Cronbach's Alpha Coefficient
20	23.28	8.003	0.717

The value of Cronbach's Alpha Coefficient is measured in the output was 0.717. According to the standard accepted as well as recommended range of values that justify the reliability of the scale is from 0.5 and above (www.statisticssolutions.com, 2018). In this way the role efficacy scale has been found to be reliable for this research. For further analysis Cronbach's alpha values have been calculated for the cases where all items remain but individually each of the item of scale was removed one by one. The results are mentioned in the following table. Even in that case, the range of Cronbach's alpha found to be within acceptable range.

Table No 2: Showing the Dimensions of the Role Efficacy Scale

Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Dimension Centrality	22.32	52.998	.623	.672
Dimension Integration	22.06	56.221	.362	.698
Dimension Proactivity	21.98	60.591	.210	.712
Dimension Creativity	21.86	59.633	.313	.705
Dimension Inter-role Linkage	21.76	58.349	.339	.702
Dimension Helping relationship	21.82	65.457	-.148	.744
Dimension Superordination	22.30	57.929	.255	.710
Dimension Influence	22.18	55.702	.470	.689
Dimension Growth	22.30	55.276	.464	.688
Dimension Confrontation	21.62	60.404	.357	.705
Dimension Centrality	22.18	61.579	.157	.715
Dimension Integration	21.78	57.196	.467	.692
Dimension Proactivity	22.82	58.069	.303	.704
Dimension Creativity	22.16	61.851	.067	.726
Dimension Inter-role Linkage	22.46	55.641	.378	.696
Dimension Helping relationship	21.76	56.553	.402	.695
Dimension Superordination	22.54	59.682	.179	.717
Dimension Influence	22.64	59.337	.174	.718
Dimension Growth	22.10	60.500	.205	.713
Dimension Confrontation	21.68	60.222	.206	.713

Cronbach's Alpha: Role Stress Scale

The reliability of the "Role Stress Scale" has been evaluated for this research study. It was evaluated by using Cronbach's Alpha Coefficient. For this evaluation the initial 50 responses were used. Following are the results of the reliability evaluation:

Table No 3: The Results of The Reliability Evaluation:

No. of Items	Mean	Variance	Std. Deviation	Cronbach's Alpha Coefficient
12	18.86	81.062	9.003	0.847

The Cronbach's Alpha Coefficient value found as 0.847. According to the references related to the acceptance values of the Cronbach's Alpha Coefficient, this value (0.847) indicated that the scale is reliable (Tabe, 2017). The Cronbach's alpha values have been also calculated if items are deleted and the results are mentioned in the following table. The range of Cronbach's alpha found to be within acceptable range.

Table No 4: Showing the Cronbach's alpha Values have been also Calculated if Items are deleted and the Results

Item-Total Statistics				
	Scale Mean if Item Deleted	**Scale Variance if Item Deleted**	**Corrected Item-Total Correlation**	**Cronbach's Alpha if Item Deleted**
I am not able to do many things for which have a great liking.	17.06	71.119	.499	.837
My role in the family conflicts with my work role.	17.24	69.696	.422	.843
I feel duty-bound as an employee.	16.42	75.065	.236	.854
I don't have enough knowledge / skills needed to do justice in my role.	17.64	69.460	.517	.835
I am not able to use my strength in the various things I do.	17.42	66.657	.675	.824
I do not get enough time for my family or friends because of my other responsibilities.	17.40	64.571	.744	.818
The obligations of my roles are more important to me than my own wishes.	17.04	70.488	.380	.847
I feel I am not doing justice to my family role (as a son, daughter/ husband, wife/ father, mother).	17.48	66.296	.675	.824
What I do in various spheres (home, institution, organizations etc.) conflicts with my values.	17.76	70.227	.526	.835
I have some other obligations (in a club, a voluntary organization, a party etc.) which conflict with my main work.	17.72	69.308	.538	.834
I am prepared to sacrifice my own values if they conflict with my duties in various roles.	17.16	64.260	.686	.822
I wish I could be better equipped to perform my role more adequately.	17.12	71.577	.340	.849

2.8.1 Findings of Reliability Testing of Role Efficacy Scale & Role Stress Scale

Cronbach's Alpha: Role Efficacy Scale

For the present research study, the researcher used role efficacy scale that was developed and validated by Udai Pareek. Ten dimensions of role efficacy have been described by this scale (Pareek U. , 2002). For reliability measure of role efficacy scale, researcher refers to Cronbach's alpha which actually check how consistent are the set of items used in the scale. The value of Cronbach's alpha coefficient rages from 0 to 1.00 (Creswell , 2018).

During analysis of Cronbach's alpha coefficient was found to be 0.717 for the role efficacy scale which contained 20 items. These 20 items were distributed among ten important dimensions of role efficacy. The extended reliability analysis was also conducted where items of scale related to specific dimension were removed and it was found that in all cases the value of Cronbach's alpha coefficient found within the range of standard accepted values.

Cronbach's Alpha: Role Stress Scale

The researcher refers to role stress scale for the measurement of role stress of sales people who were working in insurance companies. The referred role stress scale was also developed by Udai Pareek and it has been a validated scale for role stress measurement (Pareek U. , 2002). The reliability of this scale for the present study was evaluated by using Cronbach's alpha coefficient.

It was found that the value of alpha coefficient (0.847) was in the range of accepted standard (Hair, 2012). Further analysis of reliability was conducted where items of scale (12 items) were eliminated one by one and the reliability coefficient was again calculated. It was found that the value of Cronbach's alpha coefficient if item deleted was within the range of standard accepted values.

2.9 Methods Used For Data Analysis

A variety of statistical methods used during the data analysis. Firstly the collected data were edited to find any missing values and outlier values. Then the same was coded in variable view of data analysis software SPSS. The collected data summarized by using tables and figures. Descriptive statistics and cross tabulation was used to find relationships and other related aspects among variables. The analysis of data obtained by the role efficacy scale and role stress scale analyzed as per the prescribed data analysis method.

2.10 Chapterization:

- **Chapter – 1 – Introduction**
  Presents the introductions of the study topic, covered up definitions, characteristics, components, models and theories related to it
- **Chapter – 2 – Research Methodology**
  Enumerated methodology used to carry out present study that is significance to the study, objectives, research study, variable covered under study, hypothesis, universe, sample and sampling, tools used for data collections, data collections process, analysis of data and its treatments, limitations.
- **Chapter – 3 – Review of Literature**
  Outlined the different research and review related to organizational culture, productivity, leadership and organizational effectiveness.
- **Chapter – 4 – Data Analysis & Interpretation**
  Described the analysis and interpretations of data in form of frequency and percentile distributions.
- **Chapter – 5 – Findings, Conclusions, and Suggestions & Plan of Action**
  Summarized the study in terms of finding, conclusion, suggestions and plan of action.

2.11 Limitations of the Study:

Following were the limitations faced by Researcher so as to carry out present study:

- Initially organisations are ready to be a part of the research study later on while collecting data it is experienced that non-availability and non-response found on the part of organisations.
- In spite of numerous call and reminders it had been experienced that respondent took large amount of time to complete questionnaire.
- Generalizations would not be feasible to other organizations.