CHAPTER – 3
RESEARCH METHODOLOGY

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CHAPTER – 3
RESEARCH METHODOLOGY

3.1 ABOUT PRESENT STUDY :

The present study focuses on the predictive efficiency and moderating effect of growth need and organization health on job-involvement and work motivation. We can not imaging job involvement and motivation of employees directly without the intervening effect of other variables like growth need strength and the environment of the organization. Not only that, motivation is the resultant of various attitudes the employee holds toward related factors live salary, supervision, work culture, work affiliation and other associated factors. The job involvement also depends on many other factors like organizational health, work culture & type of leadership on the plant.

The globalization has created the biggest challenge for Indian industries especially when the multinational companies have an edge over Indian organizations in terms of finance, trained and skillful work force, sophisticated technology, sound infrastructure and market position. The immediate problem faced by the Indian industries is to compete successfully with other companies by producing wide range of quality products and to offer them at competitive price to the clients. This can accomplished only if the work force is highly trained, skillful, creative, innovative & highly involved in the work process. The present research is an effort in that direction. It aims at studying growth need strength, organizational health related variables as they can serve as
predictive variables for meaningful job involvement and internal work motivation.

Organizational health refers to the organization's ability to identify and adjust to the requirement for change influenced by internal as well as external factors. The concept of organizational health is concerned with the capacity of organization to cope up with various conditions and varieties of circumstances. If this is the case, then and then the organization will be able to provide proper work climate. Hence, to have a proper combination of work culture adequate working conditions and proper reward to the employees become necessary conditions to generate feeling of happiness, work motivation, and high level of work involvement. There is a tremendous impact of motivation and work involvement on work performance. In the present investigation, an attempt is made to examine the relationship between and among job involvement, work motivation, growth need and organizational health in industrial set up.

3.2 PROBLEM OF THE STUDY:

In the present research the investigator has tried to examine the predictive efficiency and moderating effect of growth need and organizational health on motivation & job-involvement with reference to technical & non technical industrial employees. The title of the study is as follows: "A study of predictive efficiency and moderating effect of growth need, organizational health with reference to job involvement and work motivation of industrial employees."
3.3 AIMS AND OBJECTIVES OF THE PRESENT STUDY:

Following are the aims and objectives of the present study:

(1) To examine the predictive efficiency of growth need strength to elicit or to generate job motivation.
(2) To examine the predictive efficiency of growth need strength to predict job involvement.
(3) To examine the predictive efficiency of organizational health to determine job motivation.
(4) To examine the predictive efficiency of organizational health to determine job involvement.
(5) To examine the moderating effect of growth need in relation to the category of employees & motivation.
(6) To examine the moderating effect of growth need in relation to the category of employees and job involvement.
(7) To examine the moderating effect of organizational health in relation to category of employees and motivation.
(8) To examine the moderating effect of organizational health in relation to category of employees & job-involvement.

3.4 SELECTION OF SAMPLE:

For the purpose of the present study a sample of 240 supervisors & 240 managers were selected at random from different departments of organizations having technical and non technical nature of work. Due care was taken to see that different department are adequately represented. Their experience was also taken into consideration. The average age of technical supervisors was 43.5, and average age of technical managers was 49.50. While the average age of non technical supervisors was 45.5 and that of manager was 50.5 years. The average experience of technical
supervisors was 13.5 years while the average experience of technical managers was 16.8 years. The average experience of non-technical supervisor was 15.6 years and average experience of non-technical managers was 18.5 years. Hence the sample was quite comparable and homogeneous in nature. The distribution of sample is shown in the table No.3.1.

Table No. 3.1

Distribution of sample having high or low level of growth need, as well as high or low level of organizational health.

<table>
<thead>
<tr>
<th>Nature of work</th>
<th>Types of employees</th>
<th>Types of employees</th>
<th>Total sample</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Supervisors</td>
<td>Managers</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Level of O.H.</td>
<td>Level of Growth need</td>
<td>Level of O.H.</td>
</tr>
<tr>
<td>Technical</td>
<td>High</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td></td>
<td>30</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>Non technical</td>
<td>High</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td></td>
<td>30</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>60</td>
<td>60</td>
<td>60</td>
</tr>
</tbody>
</table>

3.5 TOOLS:

For the present investigation, following tools were used.

(A) Growth need strength:

For the measurement of growth need strength, the job Diagnostic survey instrument constructed M.J.Rechard Hackman (1980) was used.
The scale consists of 18 statements in two sections of the questionnaire to measure the growth need.

Validity of the test:
\[ r = .82 \] content validity

Reliability of the test
\[ r = .78 \] Test retest

N = 120

**Scoring**

The questionnaires yields two separate measures of growth need strength, one from section Six (the “would like” format) and one from section seven (the “job choice” format).

**a.** “Would like” format (Section Six). Average the six items from section Six listed below. The items are: 2, 3, 6, 8, 10, 11.

**b.** “Job choice” format (Section Seven). Each item in Section Seven yields a number from 1-5 (i.e., “Strongly prefer A” is scored 1; “Neutral” is scored 3; and “Strongly prefer B” is scored 5). Compute the need strength measure by averaging the twelve items as follows:

1, 5, 7, 10, 11, 12 (direct scoring)

2, 3, 4, 6, 8, 9 (reversed scoring i.e., subtract the respondent’s score from 6)

Note: To transform the job choice summary score from a 5 point scale to a 7 point scale, use this formula:

\[ Y = 1.5 \times -.5. \]
Combined growth need strength score:

To obtain an overall estimate of growth need strength based on both “would like” and “job choice” data, first transform the “job choice” summary score to a 7 point scale (using the formula given above). And then average the “would like” and the transformed “job choice” summary scores.

(B) Organizational Health Inventory

For the measurement of organizational health of the organization, the organizational wealth Inventory constructed by Miles, M.B.(1973) was used.

This inventory consist of 40 statements to measure the organizational health.

Validity of the test: \( r = .77 \)

This test has fairly high face validity, because it really measures various components of organizational health.

Reliability of the test: \( r = 00.79 \) (Test – retest)

Areas of measurement:

(I) Task centered Dimension:

(1) Goal focus

(2) Communication Adequacy

(3) Optimal Power utilization

(II) Maintenance Needs Dimension

(1) Resource utilization
(2) Cohesiveness
(3) Morale

(III) Growth and changefulness

1. Innovativeness
2. Autonomy
3. Adaptation
4. Problem solving adequacy.

However in the present investigation total score, irrespective of individual dimensions, has been taken into account.

Category of Response:

The respondent has to reply on five point scale ranging from completely agreed to completely disagree. All items are positive items.

Interpretation of the score:

Higher score indicates perceived high organizational health and low score indicates perceived low organizational health.

(C) Job involvement scale :-

Job involvement scale was constructed by Lodhal and Kejrer (1985), was used. This scale consists of 20 statements. The respondent have to answer the statement on four point scale ranging from strongly agree, agree, disagree & strongly disagree. Higher score indicates better job involvement.
Validity:-

The test has fairly high face validity, and it really measures job involvement of the employees. It is significant that validity is quite satisfactory for all items.

Reliability:-

The reliability of the job involvement scale was found by test-retest method and it reported to \( r = .73 \). The odd-even item reliability was 0.80.

The scale consists of 20 items. The respondent has to give answer in four point scale strongly agreed to strongly disagree.

Scoring Method :-

There are thirteen statements which are positive statement viz; 1 to 9, 11, 12, 15 & 20. The range of response to be scored from agree to strongly disagree are to be scored 4, 3, 2, 1 respectively and negative statements are viz., 10, 13, 14, 16, 17, 18 & 19. These items are to be scored from 1, 2, 3, 4 each respectively on four point scale. The range of score is between 20 to 80.

Interpretation of the score:-

Higher score indicates more work involvement and low score indicates less job involvement.

(D) Measurement of Motivation :-

The work motivation was measured by the work motivation questionnaire constructed by Lambu Thomas (1985). It consists of thirty two items. The respondent has to select either A or B option from each question i.e. the respondent has to tick √ mark either
'A' or 'B' whichever the respondent find correct. The score range is from 0 to 32. The overall score indicates the level of motivation. The higher score indicates higher motivation. The mid point is considered as cut off point to decide higher level of motivation or lower level of motivation. The score more than 16 indicates higher level of motivation. And the score less than 16 indicate lower level of motivation. The average score obtained was considered for analysis.

Validity : r = .75 (content validity).

Reliability : r = .78  Test retest

N = 110

3.6 VARIABLES :

For the purpose of present study following variables have been selected.

(A) Independent Variable

(1) Growth need (High and Low)

(2) Organizational health (High and Low)

(3) Types of employee (Supervisor and managers)

(4) Nature of work (Technical & Non-technical)

(B) Dependent variables :-

(1) Score on work motivation

(2) Score on job – involvement
(C) Control variable:

(1) Employees having experience of 10 years are selected.

(2) Employees from chemical, Pharmaceutical and engineering organization are selected.

### Table No. 3.2
**Showing name, nature, number of variables and levels of variables**

<table>
<thead>
<tr>
<th>Sr. No</th>
<th>Name of the variable</th>
<th>Nature of variable</th>
<th>Number of Levels</th>
<th>Name of the Levels</th>
</tr>
</thead>
</table>
| 1      | Growth need                | Independent        | 2                | • High growth need  
                                  |                  |                    | • Low growth need       |
| 2      | Organizational Health      | Independent        | 2                | • High organizational health  
                                  |                  |                    | • Low organizational health |
| 3      | Types of employee          | Independent        | 2                | ⇒ Supervisors   
                                  |                  |                    | ⇒ Managers               |
| 4      | Nature of work             | Independent        | 2                | ⇒ Technical     
                                  |                  |                    | ⇒ Non-technical          |
| 5      | Internal work motivation.  | Dependent          | 1                | Scores on Internal work motivation.       |
| 6      | Job-involvement            | Dependent          | 1                | Scores on job-involvement                 |

### 3.7 RESEARCH DESIGN:

For the purpose of the present study the sample was selected at random from staff functionary & line functionary personnel having supervisory and managerial cadre.
Looking to the nature of the research and assumptions made in terms of various hypotheses, the researcher has decided to use Ex-Post facto research design having 480 respondents selected at random from industrial organizations.

The present research design is called Ex-Post facto design because the growth need strength, job involvement and work motivation has been shown by the respondents before the work has been undertaken.

In the present investigation the following $2 \times 2 \times 2 \times 2$ factorial design was adopted.

**Table No. 3.3**

**2 x 2 x 2 x 2 Factorial Design**

<table>
<thead>
<tr>
<th>Nature of work (A)</th>
<th>Types of employees (B)</th>
<th></th>
<th>Total sample</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Supervisors (B₁)</td>
<td>Managers (B₂)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Level of Growth need (C)</td>
<td>Level of Organizational Health (D)</td>
<td>Level of Growth need (C)</td>
</tr>
<tr>
<td></td>
<td>High (C₁) Low (C₂)</td>
<td>High (D₁) Low (D₂)</td>
<td>High (C₁) Low (C₂)</td>
</tr>
<tr>
<td>Technical (A₁)</td>
<td>30 30 30 30</td>
<td>30 30 30 30</td>
<td>30 30 30 30</td>
</tr>
<tr>
<td>Non-technical (A₂)</td>
<td>30 30 30 30</td>
<td>30 30 30 30</td>
<td>30 30 30 30</td>
</tr>
<tr>
<td>Total</td>
<td>60 60 60 60</td>
<td>60 60 60 60</td>
<td>60 60 60 60</td>
</tr>
</tbody>
</table>

3.8 **FORMULATION OF HYPOTHESES**:

In the present study the following null hypotheses were formulated for examining the relationship between the variables under study.
1. There is no significant difference between the mean score on internal work motivation of technical and non-technical employees.
2. There is no significant difference between the mean score on internal work motivation of supervisors and managers.
3. The growth need will not have any significant predictive efficiency in predicting work motivation.
4. There is no significant difference between the mean score on internal work motivation of employees having different nature of work and different typology types of employees.
5. The growth need will not have any significant predictive efficiency in predicting motivation among technical and non-technical employees.
6. The growth need will not have significant predictive efficiency in predicting internal work motivation of supervisors and managers.
7. There is no significant difference between the mean score on internal work motivation of technical and non-technical employees having high or low growth need.
8. There is no significant difference between the mean score on job involvement of technical and non-technical employees.
9. There is no significant difference between the mean score on job involvement of supervisors and managers.
10. The growth need will not have any significant predictive efficiency in predicting job involvement among supervisors & managers.
11. There is no significant difference between the mean score on job involvement of employees having different nature of work and different (typology) types of employees.
12. The growth need will not have any significant predictive efficiency in predicting job involvement among technical and non technical employees.

13. There is no significant difference between the mean score on job involvement among supervisors and managers, having different levels of growth needs.

14. There is no significant difference between the mean score on job involvement of technical and non-technical supervisors having high or low growth need.

15. There is no significant difference between the mean score on internal work motivation of technical and non-technical employees having perceived organizational health.

16. There is no significant difference between the mean score on internal work motivation of supervisors and managers, having perceived organizational health.

17. The level of perceived organizational health will not have significant predictive efficiency in predicting motivation of employees.

18. There is no significant difference between the mean score on internal work motivation of technical and non-technical employees having high or low level of organizational health.

19. The level of perceived organizational health will not have significant predictive efficiency in predicting motivation of supervisors and managers.

20. There is no significant difference between the mean score on internal work motivation of employees based on nature of work, types of employees & level of perceived organizational health.
21. There is not significant difference between the mean score on job involvement of technical and non-technical employees having perceived organizational health.

22. There is no significant difference between the mean score on job involvement of supervisors and managers having perceived organizational health.

23. The level of perceived organizational health will not have significant predictive efficiency in predicting job involvement among employees.

24. There is no significant difference between the mean score on job involvement of technical supervisors & managers compared to non-technical supervisors & managers, having perceived organizational wealth.

25. The perceived organizational health will not have significant predictive efficiency in predicting job involvement among technical and non technical employees.

26. The perceived organizational health will not have significant predictive efficiency in predicting job involvement among supervisors and managers.

27. There is no significant difference in mean score on job involvement of technical & non technical supervisors and managers having high or low organizational health.

28. The growth need will not have significant moderating effect in relation to work motivation of technical supervisors and managers.

29. There is no significant moderating effect of growth need in relation to job involvement of technical supervisors and managers.
30. The growth need will not have significant moderating effect in relation to work motivation of non-technical supervisors and managers.

31. There is no significant moderating effect of growth need in relation to job involvement of non-technical supervisors and managers.

32. There is no significant moderating effect of organizational health in relation to work motivation of technical supervisors & managers.

33. There is no significant moderating effect of perceived organizational health in relation to job involvement of technical supervisors & managers.

34. There is no significant moderating effect of organizational health in relation to work motivation of non-technical supervisors & managers.

35. There is no significant moderating effect of perceived organizational health in relation to job involvement of technical & non-technical supervisors & managers.

3.9 PROCEDURE:

The main objective of this present study was to examine the predictive efficiency and moderating effect of growth need and organizational health with reference to job involvement and work motivation of industrial employees.

The present study aims to study the relation between growth need and job involvement and also work motivation. It also aims to study the relationship between organizational health and job involvement & work motivation. It also aims to test as to how far the relationship between category of employees and work out
comes like motivation & job motivation are moderated by growth need strength. How far the relationship between category of employees & work out comes like motivation and involvement are moderated by organizational health. By keeping in mind the above aims and objectives of the study, the researcher has selected industrial employees to examine the relationship between the variables under study.

For collecting the data from supervisors and managers, three industries viz., chemical, pharmaceutical and engineering were selected situated at Baroda. Before collecting the data from the respondents, previous permission was obtained from the factory manager of the concerned organization under study. List of supervisors and managers was obtained from the personnel (H.R.) Department of the concerned organization to draw a sample for the present study. The sample was drawn as stated in the sampling method. Due care was taken to ensure that the sample should represent each and every Department of the concerned organization. Equal number of supervisors and managers were selected from both the categories viz, technical & non technical for facilitating statistical analysis. In relation to experience and age the sample was quite representative and homogenous in nature. A rapport was established with each respondent included in the sample. Each one was instructed specifically as to how to respond the questionnaire. Specific instructions were given to create perfect understanding regarding the questionnaire.
3.10 STATISTICAL ANALYSIS OF THE DATA:

ANOVA technique was used to check the significance difference between two groups under study. Correlation technique was used to examine the moderating effect and predictive efficiency of independent variables under study.

3.11 RESULTS AND DISCUSSION:

The result and discussion is incorporated in the chapter IV of the thesis. The results are discussed with the probable reasons, which are needed to understand the trend of the present employees employed in the organization.

3.12 USEFULNESS OF THE RESEARCH:

The result of present research will be very useful to prepare a profile of managers & supervisors having high or low level of growth need and also having a high or low perceived organizational health in relation to internal work motivation and job involvement. This study is very useful to examine moderating effect of growth need strength and also that of perceived organizational health. This study will also very useful in highlighting the factors which are responsible for generating motivation and feeling of job involvement.

In coming chapter No.4, the results & discussion has been incorporated.