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CHAPTER II

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CHAPTER II

RESEARCH METHODOLOGY

Social work research is the systematic method of investing and analyzing the facts. It aims at the solution of the human problems or to derive approaches for the solutions. According to the Encyclopaedia of Social Work¹ :

Social work research is the use of the scientific method in the search of knowledge, including knowledge of alternate practice and intervention technique, which would be of direct use to the social work profession and thus enhance the practice of social work methods. Social work research is the species that belongs to the genus social research or more specifically referred to as social science research. Thus, research in the social sciences is research in behavioural and personality aspect of society. Social work research focusses on or confines itself to select aspects of behaviour and alternate modes of behaviour modifications. In other words social work research helps to find ways and means to enhance social functioning.

Research methodology implies adoption of systematic procedure in conducting research. In every research work it is very essential to follow methodology. Therefore, the investigator observed the mentioned steps systematically.

1. Encyclopaedia of Social Work. 1987. 2, p. 387.

Selection of the Topic

The investigator selected the topic "A Study of Leadership Patterns and their effectiveness with special reference to a Steel Factory at Nagpur (M.S.)" due to the following reasons.

Leadership is one of the essential functions and tools of management that must be performed and used by all the executives and supervisors i.e. by all who direct the work of subordinates. Inevitably all organisations require leaders (executives and supervisors) to utilize the abilities of their employees. By virtue of their status they are the formal leaders of their subordinates. In the absence of leader the employees will be left without guidance and direction, and such situations will only lead toward confusion and non-attainment of organisational objectives.

One of the important human activities is leading, for all the supervisors of all the levels. All kind of enterprises have the basic task of maintaining an environment in which individuals working together in groups, can accomplish selected objectives and targets. Leadership is an interpersonal area of practice. An effective

leadership is virtually important to effective managing. The importance of superiors' perceptual awareness of leadership patterns is of great importance. Leadership harmonizes individual and organizational objectives. In the course of leading the superiors tend to follow predominant patterns pertaining to the various facets of leadership practice, and howfar these patterns are effective in achieving the objectives is of immense importance.

In shop-floor executives are the prominent personnel of the organization who are entrusted with the implementation of the management policies in an efficient manner to achieve the decided targets. To achieve it, the executives are expected to lead their subordinates who are mainly the employees of supervisory cadre.

In the factories the first level supervisors have direct control over the operative employees. Therefore, they are invariably incharge of production, initiating and receiving communications, assigning and checking work, and get the work done through the achievement of individual and group targets of operative employees that is, workers. To perform all these functions the supervisors are expected to adopt specific approaches or patterns to lead the workers effectively.

The another important factor in the selection of the topic was that the role of the personnel department in developing leadership skills is crucial one. The personnel department has the responsibility of recruitment and selecting executive and supervisory personnel with leadership skills. Further, training and developing them in leadership in order to be effective in their present and future jobs and get the work done in an harmonious manner from the subordinates. It is the responsibility of the personnel department, realizing and meeting the leadership needs of the superiors for achievement of individual, group, and organizational development and achievement of targets.

Personnel Management is one of the specializations of professional social work. Personnel management and social work both are concerned with the human constituents of an organization. In social work practice much significance is attached to the leadership in group and community development, and in social action for removal of the social evil. Being part of social work, personnel management is also based on principles of humane dealing with empathy, dignity of man, uniqueness, etc., with the objective of helping people so that they can help themselves. That is to say developing in superiors leadership abilities to enable them to accomplish goals through effective leadership.

The investigator is the student of M. Phil. in Social Work with specialization in Personnel Management. As a partial fulfillment of the academic requirement it was essential for the student to write a dissertation on the topic related with the social work discipline and the specialization.

The investigator observed that in Shivaji University, no study was conducted related to the formal leadership of the shop-floor. Therefore, to avoid duplication of the study, the investigator had preferred to undertake the dissertation on the mentioned topic.

In addition, the investigator studied the available literature on leadership and discussed the significance of the subject in detail with her dexterous Research Guide and based on his valuable suggestions finalized the topic for the dissertation.

Objectives of the Study

- i. To study the background of the superiors and subordinates.
- ii. To study the leadership qualities existing among the superiors.

- iii. To study the leadership patterns in decision making.
- iv. To study the leadership patterns in observance of rules and regulations by the subordinates.
- v. To study the leadership patterns in giving supervision to the subordinates.
- vi. To study the leadership patterns in showing the concern for work performance and subordinates.
- vii. To study the leadership patterns in motivating the subordinates to work.
- viii. To study the leadership patterns in giving consistent treatment to subordinates.
- ix. To study the leadership patterns in giving directives and guidance to the subordinates.
- x. To study the leadership patterns in maintaining superior-subordinate relationship.
- xi. To study the effectiveness of various leadership patterns.
- xii. To study the effectiveness of leadership based on resulting factors.
- xiii. To test the validity of the hypotheses.
- xiv. To make suggestions based on findings.

Hypotheses

- i. Superiors in an organisation are influenced by the leadership patterns of their immediate superiors.
- ii. There are differences between perception of superiors about their own leadership patterns and the patterns perceived by their subordinates.
- iii. A positive motivational approach to leadership results in effective leadership.

Method of Research

In every research project it is essential for the investigator to select the appropriate method of research. There are various methods of research namely, (i) case study method, (ii) experimental method, (iii) historical method, (iv) social survey method and (v) statistical method.

Based on the nature of the study first three methods were found absolutely nonapplicable.

The investigator adopted social survey and statistical method for research.

"Social survey is the scientific study of a social phenomena, having a definite geographical bearing".² Many research problems require the systematic collection of data of universe or sample of universe through the use of various methods of data collection, mainly by way of interview schedule and questionnaire. These studies are usually called as surveys.

" The survey method is not the specific method of any one social science discipline, and it is broadly applicable to the problems in many fields. It is this capacity of wide application that gives the survey technique its great usefulness in the behavioural sciences"³ i.e. including social work.

The survey method is used when the desired information can not be obtained more easily and less expensively by using other methods.

The investigator preferred to use survey method in comparison to the other methods in social work research due the following reasons.

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2. S. R. Bajpai. 1976. Methods of Social Survey and Research. Kanpur : Kitabghar, p. 63.
 3. L. Festinger and D. Katz. 1970. Research Methods in the Behavioral Sciences. New Delhi : Amerind Publishing Co. Pvt. Ltd., p. 16.

- i. The survey enabled the investigator to contact the respondents directly. She was in a position to find the facts herself. Her inferences therefore, are based on the facts and not upon the theory.
- ii. By adopting survey method the investigator was able to retain greater objectivity. Only respondents views on the subject was taken into consideration. The data were not influenced by any one man's views or belief.
- iii. Survey method is one of the widely used methods where the application of the other methods is not possible. Similiarly it was not possible to use any other method by the investigator due to the reasons already cited, the survey method was found more convenient and result oriented by the investigator.
- iv. The investigator conducted the study in a steel factory. This was sufficiently limited area so that the study of leadership patterns was geographically confined.
- v. The scientific collection of data in survey method was of immense use for the investigator to draw scientific and objective conclusions and suggestions.

- vi. In comparision with other methods, the investigator observed survey method to be more popular, convenient, less money and time consuming.
- vii. The facts collected through survey immensely helped the investigator to test the hypotheses.

The statistical method include "all the general principles and techniques which are commonly used in the collection, analysis, and interpretation of data relating to any sphere of enquiry ".⁴ It is the "science of measurement of social phenomena considered as whole in its manifestations ".⁵ It is the method of judging social phenomena from the results obtained. This method is used for aggregative analysis and intensive study of a social unit. The other fundamental characteristic of statistical method is that, it is based upon quantitative analysis of a social phenomena.

Taking into consideration the nature of study in which the investigator had not merely studied the leadership patterns but also the effectiveness of these patterns and

4. D. N. Elhance. 1987. Fundamentals of Statistics. Allahabad : Kitab Mahal, p. 1.6.

5. Bajpai, op.cit., p. 118.

over. all leadership, along with the survey method of research the investigator had to make use of the statistical method of research.

Based on the following reasons the investigator used the statistical method.

- i. "Statistics provides measurement to a social phenomena".⁶ Leadership is a social phenomena. In order to assess the effectiveness of leadership and patterns it was realized by the investigator that a statistical measure is essential.
- ii. "Statistics provides description of fact by means of numbers".⁷ The statistical analysis enabled the investigator to understand the magnitude of the effectiveness.
- iii. Statistical method was of great help in objective and accurate valuation of leadership.
- iv. The statistics provided the facility to the investigator for comparative analysis of the perceptions and opinions of the executives, supervisors, and workers.
- v. It also enabled the investigator to study the

6. ibid., p. 121.

7. ibid., p. 122.

the relationship between the perceptions of executives, supervisors, and workers about leadership.

Scope of the Study

In every research project it is very essential to define the scope of the study to be specific about the content, geographical limits, and duration of the research period.

The scope of the study included : leadership patterns, their effectiveness, and the effectiveness of the leadership; confined to the formal leadership of the superiors of the shop-floor of a steel factory (M/s Firth (India) Steel Co. Ltd., M.I.D.C. Area) at Nagpur M.S. during the period 1988-89.

Coverage of Items

- i. Background of the respondents
- ii. Trait approach and leadership
- iii. Decision making and leadership
- iv. Observance of rules and regulations by the subordinates and leadership

- v. Supervision of subordinates and leadership
- vi. Showing concern for work performance and subordinates, and leadership
- vii. Motivation to work and leadership
- viii. Consistency in treatment of subordinates and leadership
- ix. Directives and guidance to subordinates, and leadership
- x. Superior-subordinate relationship and leadership
- xi. Effectiveness of leadership patterns, and leadership
- xii. Introduction of the factory
- xiii. Significance and content of leadership

Operational Definitions

Based on the nature and content of the study, the following concepts are defined.

i) Leadership : Leadership is the interpersonal influence exercised by the all levels of superiors, by virtue of their status in the organizational hierarchy, on the behaviour of the immediate subordinates as the followers, towards the accomplishment of the goals in the shop-floor of the factory.

ii) Leadership pattern : The mode of behaviour or the style or the approach a superior reflects in his role is described as the pattern of leadership. Different leadership patterns are adopted by the superiors about the different facets of leadership content at different situations. It is the predominant pattern of the superior's behaviour about the specific facet of the leadership that sets the pattern of their leadership.

iii) Effectiveness of leadership pattern : In this, 'Effectiveness' means capability of producing results adopted for the desired end. By effectiveness of leadership pattern it is meant that how much result oriented is the predominant approach or pattern or style of leadership adopted by the superiors.

iv) Effectiveness of leadership : Effectiveness implies capability of producing result adopted for the desired goal. Effectiveness of leadership means how much result oriented is the interpersonal influence, which is exercised by the superior on the behaviour of their immediate subordinates.

v) Permanent skilled workers : This means a worker who is employed on a permanent basis according to the

standing orders of the factory, and who has acquired expertise or skill in his work. Further, whose name is included in the skilled category of workers of the factory, and who is drawing daily wages according to the wage scale meant for the skilled category, includes skilled III grade, skilled II grade, skilled I grade and highly skilled.

vi) Supervisor : Supervisor means a person who is employed in the shop-floor of the factory to directly supervise the working of the workers. He forms a link between the workers and executive. Further, one who is employed in the factory in the supervisory cadre and whose name is borne in the muster-roll of the supervisory cadre as per the factory rules.

vii) Executive : An executive is a person who is employed in the shop-floor of the factory in the executive cadre and whose name is borne on the muster-roll meant for the executive cadre. Further, he is an employee of higher status in whom the authority of execution is vested.

viii) Superior : A superior is a person employed in the shop-floor of the factory. He, who controls and supervises the work of his immediate subordinates. A

superior can be either a supervisor or an executive or an executive's boss (superior).

ix) Subordinate : A subordinate works directly under the control and supervision of his immediate superior in the shop-floor of the factory. A subordinate can be either an executive or a supervisor or a worker.

(a) an executive is the subordinate of his immediate boss (superior)

(b) a supervisor is the subordinate of an executive

(c) a worker is the subordinate of a supervisor

x) Shop-floor : The shop-floor means the department of the steel factory where manufacturing process is carried out.

xi) Autocratic pattern in decision making : The immediate superior makes and announces decisions.

xii) Benevolent autocratic pattern in decision making: The immediate superior presents ideas and invites comments before taking decision.

xiii) Consultative pattern in decision making : The immediate superior presents problems and invites suggestions before taking decisions.

xiv) Participative pattern in decision making : In this decisions are taken through active participation of superior and subordinates.

xv) Free-rein pattern in decision making : The immediate superior defines the limits and let the subordinates to take decisions.

xvi) Absolute free-rein pattern in decision making : The immediate superior leaves entire responsibility on the subordinates to take decisions by themselves.

xvii) Concern for work performance & subordinates : The term 'concer for' means to convey how and to what extent the superiors are interested or attach importance to the work performance of the subordinates as human beings working in the factory.

xviii) Positive motivation to work : Positive motivation includes encouragement, appreciation, and monetary and non-monetary rewards.

xix) Negative motivation to work : Negative motivation includes creation of fear in the minds of subordinates or imposing penalty even for minor mistakes or both.

xx) Formal leadership : The formal leaders are those superiors who possess organisation authority to direct and control the activities of the subordinates. The interpersonal influence exercised by these superiors by virtue of their status in the organisational hierarchy on the behaviour of their subordinates towards the accomplishments, is termed as formal leadership.

Unit of the Study

For the selection of the samples it was essential for the investigator to take decision about the unit of the study. Based on the nature of the study three types of units were taken into consideration.

- i. A permanent executive of the shop-floor of the factory.
- ii. A permanent supervisor of the shop-floor of the factory.
- iii. A permanent skilled worker of the shop-floor of the factory.

Sampling

When the part of the universe taken as the representative of the whole, the study is called sampling study. "The principal aim in selecting a sample and studying it, is to acquire the maximum information about the population with the least expensive of time, money, and energy" ⁸

There are various methods of sampling. Based on the objectives and the hypotheses of the study, it was essential and appropriate for the investigator to adopt purposive sampling which is also known as judgemental sampling.

The basic assumption behind the adoption of purposive or judgemental sampling was that with the exercise of good judgement and suitable criterion the samples could be chosen.

About the selection of the factory for conducting research, it was observed that there were several steel factories at M.I.D.C., Nagpur. Out of these factories M/s Firth (India) Steel Co. Ltd., found to be one of the big and oldest factories with a good reputation. Therefore, the investigator on the basis of judgement selected the mentioned factory for the dissertation work.

8. A. B. Rao. 1972. Essential Statistics. Poona : Continental Prakashan, p. 192.

To study the leadership patterns and effectiveness in shop-floor of the factory, it was essential to select the samples representing executives, supervisors and workers. Further, it was also essential to select the samples from these categories having superior-subordinate relationship.

Looking into the significance of the hypotheses, it was realized by the investigator that only those respondents should be selected who form the linking chain of superior-subordinate relationship.

Only 12 shop-floor executives of different sections were observed to have direct control over the supervisory category.

Further, it was clearly noted that in order to retain uniformity in the selection of the supervisors who were immediate subordinates to the mentioned selected executives, the selection of two supervisors per executive was the only possible number. Thus, 24 supervisors were selected.

Likewise, in the selection of the workers the same principle was observed that the uniformity should be maintained in the selection of the permanent skilled workers who were immediate subordinates of the supervisors. Thus, keeping in view the mentioned principle 3 permanent skilled

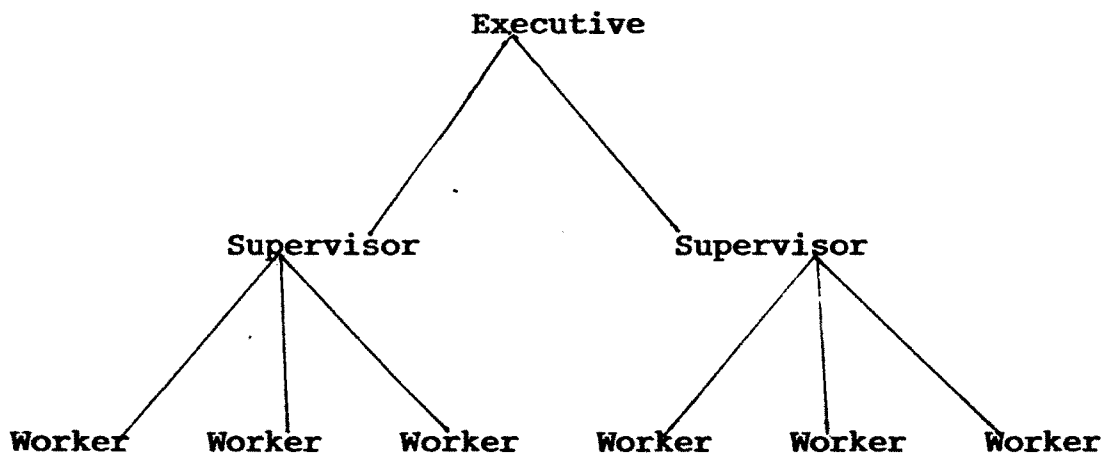
workers per supervisor were selected, which was found to be the only possible number to retain the uniformity in the representation. Thus, in all 72 workers were selected.

The reason behind the selection of the skilled permanent workers was that, they have comparatively long standing in the organisation than the semiskilled, unskilled, temporary, and casual workers. This fact is noted by discussing with the personnel officer that the factory does not face labour turnover problem. Further the workers gain expertise or skill in work through their experience. The permanent skilled workers have comparatively more chances of interaction with the supervisory category staff. Hence, they were found to be better respondents to tender their opinion about the leadership of their supervisors.

It is evident that organisational structure is always considered to be in the shape of a pyramid. This means at higher level the organisation is manned by comparatively less number of personnel. At supervisory level the strength of the personnel is found to be more than the executives, and at the level of operative employees the strength of the workers is found to be much more than the supervisory staff. Therefore, it was felt by the investigator that proper representation should be given to each category of

respondents. Therefore, 12 executives, 24 supervisors, and 72 permanent skilled workers i.e. in all 108 respondents were selected for the study. Approximately, fifty percent of the personnel from each category were included as the sample respondents for the study. All the respondents were permanent employees.

Based on the mentioned reasoning by adopting the following selection model the respondents of all the three levels namely, executives, supervisors, and workers were chosen.



The following table indicates the distribution of samples from the shop-floor section of M/s Firth(India) Steel Company Limited, Nagpur, based on the purposive sampling.

TABLE 2.1

Distribution of Samples Based on the Shop-floor Sections

Shop-floor Section	Executive Category	Supervisory Category	Skilled Workers Category	Grand Total
	Sample Strength	Sample Strength	Sample Strength	Sample Strength
Steel Melting Shop	2	3	4	10
			12	30
			18	43
Forge Shop	1	2	2	5
			6	8
			9	12
Rolling Mills	2	3	4	9
			12	42
			18	53
Electrosmelt Refining	1	1	2	4
			6	7
			9	10
Laboratory	2	5	4	11
			12	13
			18	27
Maintenance	4	7	8	19
			24	49
			36	72
Total	12	21	24	47
			72	149
			108	217

Method of Data Collection

Primary Source : The two most important tools generally used in social surveys are schedule and questionnaire. The only difference between the two is the fact that schedule is filled in by the investigator, while questionnaire is filled in by the respondents.

There are various types of schedules. Out of these the investigator used combination of interview schedule and rating schedule as a tool for collecting primary information.

The schedule was divided in four parts. First part contained the preliminary information about the topic of the study, name of the investigator and the research guide, course, educational institution, Schedule No. and a brief note.

IN the second part questions pertaining to the respondent's background were asked. Third part of the schedule contained the questions relating to the various leadership patterns. Whereas, the fourth part of the schedule included the questions with scoring scale responses about the effectiveness of leadership.

The investigator constructed the five point internal consistency scale i.e. 0, 1, 2, 3, and 4. The highest value was assigned to the most positive response.

For eg. Whether leadership of your superior has resulted in a sense of satisfaction among his subordinates. Responses and scale value :

Extremely	Very much	A good deal	A little	Not at all
4	3	2	1	0

The respondents were asked to give the most appropriate response. The validity of the scaling technique was confirmed based on the following grounds :

a. Logical validation : The scale was logically framed based on the common sense reasoning and the proper values were assigned.

b. Jury opinion : To ensure the correctness of the scaling technique opinions of the experts were sought. The experts were Research Guide, Psychologists and the Personnel Executive.

Two sets of interview-cum-rating schedules were constructed by the investigator. Majority were closed end questions with an alternative of any other to provide the line of direction to the respondents for giving responses.

One set was for the executive category and supervisory category. They were asked to express opinion about their own leadership as superiors, and at the same time to give opinion about the leadership of their immediate superiors. For the supervisors the executive respondents were the immediate superiors. For the executives non-respondents executives (superiors) were the immediate superiors.

The another set of interview-cum-rating schedule was constructed for the workers category. The workers were only asked to tender their opinion about the leadership of their immediate superiors i.e. supervisory category.

To assert the correctness of both the sets of interview-cum-rating schedule it was pretested and needed modifications were made.

The investigator preferred to use interview-cum-rating schedule method as a tool for data collection due to the following reasons :

- (a) The personal presence of investigator in the factory for collecting data enabled her to contact the needed number of respondents personally for collecting data.
- (b) The investigator was able to convince the respondents about the academic purpose of the study as well as able to explain them the significance and content of the study.
- (c) The investigator cleared the doubts of the respondents about the questions which they were not able to understand.
- (d) The investigator could build up a conducive atmosphere by establishing rapport with respondents to get their free and frank responses.
- (e) The schedule was filled by the investigator. During the course of conversation to retain its continuity the investigator used the short forms for her own understanding without interrupting the tempo of discussion.
- (f) The very presence of the investigator in the schedule method provided an opportunity for human element to be present with warmth.

ii. Secondary source : The investigator made use of reports, records, and literature on the subject as the

secondary source of information for data collection.

The preliminary information from these sources were needed as a base for collecting data for using primary source.

Data Collection

After the decision about the number and types of samples required and the finalization of the tool for the data collection, the investigator personally contacted each respondent and explained the purpose of the study.

After establishing rapport the investigator collected the information about each question incorporated in the schedule. The investigator filled in the responses in the schedule by herself.

The investigator completed data collection form primary source during the month October and November 1988.

Data Processing

"Processing of data refers to concentrating, recasting, and dealing with data so that they are as

amenable to analysis as possible ".⁹ Further, to deal with the data in the light of hypotheses and objectives and drawing conclusions.

After the collection of data, data processing was done which included several steps for drawing conclusions.

i) Classification : First of all, the collected data was classified according to their resemblances or affinities. For making clear classification, the data was edited. The vary objective of classification of data was to express the complex, scattered, haphazard data in the concise, logical, and intelligible form.

ii) Coding : Coding implies assigning of symbols to the classified data. The numeral codes were assigned to the classified data by the investigator for the transformation of the classified data in the Master Chart.

iii) Master chart : It is a big sheet that contains all the information about the collected data in the code form.

9. J. Galtung. 1967. Theory and Methods of Social Research. as cited in T. S. Wilkinson and P. L. Bhandarkar. 1977. Methodology and Techniques of Social Research. Bombay : Himalaya Publishing House, p. 333.

After coding, the investigator transformed the data relating each and every schedule in the Master Chart in the form of numerical codes to facilitate tabulation.

iv) Tabulation : Tabulation means, the entire process of arrangement based on similarities and common characteristics of the given data in certain rows and columns i.e. in tabular form for the quick and easy comprehension of the data.

Based on the information presented in the master chart in the form of numeral codes, the investigator prepared different types of tables namely, simple, multiple and cross tables and suitable headings or title to each table were given. The different columns of the tables were given appropriate stub-head and caption. The tabulation was done to facilitate analysis.

v) Statistical calculations : Based on the nature of the study and to test the hypotheses it was essential for the investigator to apply statistical method for analysis and interpretation of data.

The investigator made the following statistical calculations in dealing with the data :

a) Arithmetic mean formula

$$A. M. = a + \frac{\sum fd}{n} \times i$$

where, a = assumed mean

fd = sum of the products of deviation and
their respective frequencies.

i = size of class-interval

n = total number of frequencies

b) Standard deviation

$$S. D. = \sqrt{\frac{\sum fd^2}{n} - \left(\frac{\sum fd}{n}\right)^2} \times i$$

c) Coefficient of variation

$$\text{Coefficient of Variation} = \frac{\text{Standard deviation}}{\text{Mean}} \times 100$$

d) Coefficient of association of attributes

$$Q = \frac{(AB)(ab) - (Ab)(aB)}{(AB)(ab) + (Ab)(aB)}$$

Where, Q = Coefficient of association of
attributes A and B

A and B denote attributes

a and b denote absence of these attributes

e) Coefficient of correlation

By using Rank Correlation Method

$$r = 1 - \frac{6 \sum d^2}{n(n^2 - 1)}$$

Where, r = coefficient of correlation

d = rank difference

n = number of pairs of items

For common ranks in original formula

$$\frac{m(m^2 - 1)}{12} \text{ is added,}$$

Where, m = number of common ranks

f) Probable error of correlation coefficient

According to Prof. A. B Rao¹⁰ probable error as a measure for interpreting coefficient of correlation is based on the following grounds :

- i) If, the value of r is less than the probable error, there is no evidence of correction.
- ii) If, the value of r is more than six times it is significant correlation.

10. Rao, op.cit., p. 302.

- iii) If, the probable error is not much and coefficient of correlation (r) is more than .5 then there is good evidence of correlation.

According to Elhance¹¹

Probable error as a measure of interpreting coefficient of correlation should be used only when a sample study is being made and the sample is representative.

The investigator applied the mentioned criterion in interpreting coefficient of correlation.

Formula

$$\text{Probable error of correlation coefficient} = \frac{1 - r^2}{\sqrt{n}} \times .6745$$

where, r = coefficient of correlation

n = number of pairs of observations

g) Average score

$$\text{A. S.} = \frac{x_1 w_1 + x_2 w_2 + x_3 w_3 + x_4 w_4 + x_5 w_5}{x_1 + x_2 + x_3 + x_4 + x_5}$$

11. Elhance, op.cit., p. 11.43.

Where, x_1, x_2, \dots are numbers of frequencies

w_1, w_2, \dots are weights

h) Percentage of average score

$$P. A. S. = \frac{\text{Average score}}{\text{Highest score}} \times 100$$

i) Intensity of effectiveness : To measure the intensity of effectiveness the following inventory scale was constructed.

<u>Percentage of average score</u>	<u>Intensity of effectiveness</u>
0 - 20 percent	Not at all effective
21 - 40 percent	A little effective
41 - 60 percent	A good deal effective
61 - 80 percent	Very effective
81 - 100 percent	Extremely effective

vi) Analysis and interpretation : Analysis is the detailed examination of the collected data keeping in mind the objectives and hypotheses of the study. It is the systematic description of the facts.

Interpretation explains and enables to understand the significance of the findings in the light of objectives and

hypotheses. Through interpretation meaning and implications of the study becomes clear.

Analysis and interpretation are interrelated. Interpretation can not proceed without the analysis. If analysis involves the organisation of data, it is the interpretation that explains the meaning of analyzed data in a specific way.

Keeping in mind the mentioned importance of analysis and interpretation in research, based on the facts presented in the various tables and the statistical calculations, the investigator analyzed and interpreted the data.

vii) Conclusions and suggestions : Conclusion implies presentation of the main findings of the study based on the objectives, hypotheses, analysis, and interpretations.

Suggestions are the recommendations made by the investigator based on the observation of the mentioned facts.

The significance of conclusions and suggestions in the social work research as a last step of data processing impelled the investigator to draw conclusions, and

subsequently suggestions were made.

Limitations of the Study

- i) The study was only limited to the study of the formal leadership. Therefore, the existence of informal leadership can not be perceived through this study.
- ii) The study was only confined to the leadership of the shop-floor. Its findings can not be made applicable to the service departments.
- iii) The findings and conclusions of the study are only applicable to M/s Firth(India)Steel Co. Ltd., the situation may vary in other factories.
- iv) Due to the nature of the study, purposive sampling method was adopted. Thus, certain statistical tests which are only applicable in the random sampling could not be applied.
- v) Due to the limitation of time, all the details of the leadership could not be studied.

Chapterization

To present the findings in the logical and systematical manner the investigator divided the contents in the following chapters.

<u>Chapter</u>	<u>Ti</u>
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