CHAPTER THREE

METHOD:

TOOLS USED, DESIGN
AND
PROCEDURE
CHAPTER THREE

OUTLINE

METHOD

Sample, Tools Used, Design And Procedure

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METHOD

Sample, Tools Used, Design and Procedure

The detailed description of relevant literature in Chapter One, the outlining of the scope and objectives of this research, and the framing of the hypotheses in Chapter Two, pave the way for adopting a design, selecting tools, and defining the procedure which is appropriate for resolving the issues of motivational patterns, leadership styles and subordinate interpersonal perceptions to which this study is addressed.

In the forthcoming pages, the nature of the sample studied, the kind of tools used and the procedure adopted will be discussed.
I SAMPLE

The nature of the investigations was such that it necessitated the study of groups, with each group consisting of a boss and his subordinates. The average size of the group was 4 (i.e. 1 boss and 3 subordinates). The minimum size of the group was 2 (1 boss and 1 subordinate) and the maximum size was 9 (1 boss and 8 subordinates). The total number of groups studied was 99 bosses with 287 subordinates. In other words, a total of 386 individuals contributed to the data for this study.

A total of 16 organisations were included in this study. Care was taken to include organisations from Public Sector, Private Sector, and also Multinationals.

Out of the 99 groups studied, 40 were engaged in technical work (eg. production, production scheduling, engineering, maintenance etc.) and 59 were engaged in non-technical work (eg. marketing, finance, personnel, training, etc.) The exact, sector-wise and organisation-wise break up of technical and non-technical figures, may be had from Table 1 on the following page.
<table>
<thead>
<tr>
<th>INDUSTRIAL SECTOR</th>
<th>ORG CODE</th>
<th>Technical Boss</th>
<th>Non-technical Boss</th>
<th>Job Level of Bosses</th>
<th>Job Level of Subordinates</th>
<th>TOTAL NUMBERS</th>
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<td>23</td>
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<td>7</td>
<td>1</td>
<td>7</td>
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<tr>
<td>TOTAL (n = 16)</td>
<td>40</td>
<td>121</td>
<td>59</td>
<td>166</td>
<td>8</td>
<td>87</td>
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</table>

TABLE 1: Tabular Representation of Total Sample.
Job levels of bosses and subordinates was decided upon reviewing the organisation chart and in consultation with the Human Resources Departments of the concerned organisations. The general principles kept in mind here were that Level 1 would include those people who were in independent charge of an entire unit. Level 2 would include those people who were at a 'department head' level, in charge of a full functional department. This included people in the senior management team of the organisation, with responsibilities for decision making regarding departments. Level 3 pertained to those individuals who would normally be regarded as 'middle managers’ with a fairly large degree of functional autonomy. This would include sectional in-charge, and other middle level managers who would be assisting the department heads. Level 4 was that level which may best be described as the first line managers. Those that were in the 'junior level’ management, at the bottom of the management hierarchy. For organisation-wise and sector-wise numbers of individuals, refer to Table 1 on the previous page.

As regards sex distribution in the sample, there was a very small number of women in the groups studied. This was so because the study was conducted with officers and managers, where women have yet to be felt in large numbers. In addition, the women that were included in this sample belonged to mixed groups, where men and women were working together. Thus, it was not possible to segregate the men/women responses. Although there were many groups where there were men only, there was not a single group where both boss and subordinates were female. As such, it was not possible to have a separate analysis for males and females.
A. Criterion for Sample Selection

The problem entails the study of relationships and perception of others. Logically, this would include a temporal element. A newcomer to the boss-subordinate relationship, would not have had time to consolidate his position, to know his superiors, peers and subordinates. He or she would still be in the process of adjustment to his job and his new environment. As such, his perceptions would be too raw and may or may not truly reflect reality. After discussions with a few experts, it was decided that a time span of one-year was adequate to get to know one's environment, and consolidate one's working relationships. Thus, only those work relationships that were in existence for an year or more were included in our study. In those cases where the boss was new (less than one year in his job), the entire group was rejected. Similarly, in those cases where any of the subordinates was working for less than one year with his boss, he was excluded from this study.
In the earlier pages, the basic parameters being considered in this investigation were defined. These are:

A) Motivational Patterns of Superiors

B) Leadership Styles - Self rating by managers

C) Perceived Leadership Styles - Subordinate rating

D) Perceived Need Deprivation and Need Importance of Subordinates

Corresponding to the above, the following instruments were used in this investigation:

A) Edwards Personal Preference Schedule (EPPS)

B) (i) Leadership Effectiveness and Adaptability Description (Self) (LEAD-Self)

(ii) Leader Behavior scale (I) (LBS-I)

C) (i) Leadership Effectiveness and Adaptability (LEAD-Others)

(ii) Leader Behavior Scale (II) (LBS-II)

D) Porter's Need Satisfaction Questionnaire (PNSQ)

Annexure A consists of a sample of the set of questionnaires issued to all the bosses, and Annexure B consists of a sample of the set of questionnaires issued to all subordinates. These instruments are discussed briefly in the forthcoming pages.
A. EDWARDS PERSONAL PREFERENCE SCHEDULE.(EDWARDS 1959)

The EPPS was designed primarily as an instrument for research and counselling purposes to provide quick and convenient measures of a number of, relatively independent normal personality variables. The statements in the EPPS and the variables that these statements purport to measure have their origin in a list of manifest needs presented by H.A. Murray et.al (1938)

The EPPS provides measures of 15 personality variables. These are : Achievement, Deference, Order, Exhibition, Autonomy, Affiliation, Intracception, Succorance, Dominance, Abasement, Nurturance, Change, Endurance, Heterosexuality, Aggression.

For the purposes of this study, this questionnaire has been modified to include only those items that are related to the following variables

1) Achievement (Ach)
2) Affiliation (Aff)
3) Nurturance (Nur)
4) Dominance (Dom)

The original EPPS is based on the forced-choice method. Thus, in the modified version used here, all the statements pertaining to the above four needs were segregated and fresh pairs of statements were formed. Each statement was paired with each other, resulting in 36 items or pairs of statements in all.
SCORING PROCEDURE

In the 36 pairs of statements, there were 72 statements in all, with 18 statements pertaining to each need category. Whenever a subject checked a particular statement, he scored 1 on that need area. Thus it was possible for a respondent to obtain a score ranging from 0-18 on any of the four manifest needs, with a total score equalling 36.

B. LEADER EFFECTIVENESS AND ADAPTABILITY
DESCRIPTION (LEAD) (HERSEY AND BLANCHARD, 1983)

The LEAD instrument (1983 version) gives the respondent twelve situations in which they are asked to select from four alternative leadership styles, the response that would be most representative of their behavior in that situation. These twelve situations comprise of three situations each involving groups of low maturity (M1), low to moderate maturity (M2), moderate to high maturity (M3) and high maturity (M4). For each of these situations there is a choice of four alternative actions each relating to the four styles of leadership - S1, S2, S3 and S4.

This questionnaire is available in two formats. One is the 'self-rating' format where each person responds to the instrument in relation to his own reactions. The other is the 'others-rating' format where each person responds to the instrument in relation to how he perceives another specific person (in this case his boss) would probably react. Both these versions are used in this study.

SCORING PROCEDURE

Using the revised procedure for scoring of this instrument, it is possible to get two kinds of scores about the respondents. The first of these is labelled Style Range and the
second is **Style Adaptability**. Style Range refers to the extent to which the respondent is able to vary his or her leadership style, i.e. the extent to which each of the four leadership styles is manifested in his behavior. Style range is however not as relevant to effectiveness as Style Adaptability. A wide style range will not guarantee effectiveness. Style Adaptability, on the other hand is the degree to which the respondent is able to vary his style appropriately to the demands of a given situation according to the Situational Leadership Theory.

According to the revised scoring procedure for this instrument, it is possible for the respondent to score between 0-12 against each of the four styles, and between 0-36 on Style Adaptability. Scores between 0-18 on Style Adaptability indicate ineffectiveness of the leader, and above 18 indicate effectiveness of the leader.

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**C. LEADER'S BEHAVIOR SCALE (LBS) SINHA (1986)**

A leadership style scale, developed by J.B.P.Sinha of the A.N.Sinha Institute of Social Sciences, Patna, was used in these investigations. In the latest (1987) version of the scale, there are altogether 60 items which are evenly distributed among the following six styles of leadership.

1) Authoritarian (F)
2) Bureaucratic (B)
3) Nurturant (N)
4) Task Oriented (T)
5) Participative (P)
6) Nurturance Contingent Upon Task Performance (NT)

The scale items are arranged in a 5-point, Likert-type rating scale, and the respondents are required to check one item from the following.

<table>
<thead>
<tr>
<th>Always</th>
<th>Usually</th>
<th>Sometimes</th>
<th>Rarely</th>
<th>Never</th>
</tr>
</thead>
</table>

In the present study, the Leader's Behavior Scale (LBS) was used to measure the self-ratings of a leader and the subordinate's ratings of the leader's behavior. In the self ratings of a leader, the items were in the first person i.e. in the 'I' format. For example:

"I help my subordinates even in their family matters.'

This format, LBS(I) was administered to the bosses of each group. In the subordinate rating of each format the items are arranged in the third person i.e. to 'He' format. For example.

'He helps his subordinates even in their family matters.'

SCORING PROCEDURE

For this instrument, each item is positively keyed, and the scoring system is as follows;

Always — — — — 5

Usually — — — 4

Sometimes — 3

Rarely — — 2

Never — — — 1
The scores across 10 times of a style are to be added up and the total for each style is to be taken as the score for that style. Thus, it is possible to obtain a score ranging from 5-50 on each leadership style.

D. THE PORTER'S NEED SATISFACTION QUESTIONNAIRE (PORTER, 1961)

This questionnaire provides us with information about perceived deficiencies in psychological need fulfillment and the importance attached to types of psychological needs.

1) Categories of needs and specific items

The categories of needs studied in the present investigation are: safety, social, esteem, autonomy & actualisation. The items were arranged randomly in the questionnaire. The categories are arranged in approximate hierarchical order from lowest-order (most prepotent) to highest-order (least prepotent). These categories and their hierarchical arrangement are in general agreement with the classification system used by Maslow (1954) with two major exceptions. First, the questionnaire does not contain any items relating to the most prepotent needs - physiological needs - since these needs are presumably so adequately satisfied for any managerial person that questions concerning them would appear irrelevant and unnecessary to the respondent. The second major deviation from Maslow's system is the addition of an 'autonomy' category. The items included under this category of 'autonomy' are those that in Maslow's system would be included in the 'esteem' category. Here, however, these items have been put into a separate category since it seemed that they are logically distinct from other items that are more commonly associated with the term...
'esteem'. Therefore, the autonomy items have been inserted in the hierarchical order of needs between the esteem category and the self-actualisation category, to which they have some relation. In addition to items that could be classified under particular need categories, two other items were included that seemed relevant to two or more of the categories. These two items are listed separately as non-specific items, and relate to (i) 'pay' factor and (ii) a 'feeling of being-in-the-know' in the organisation. (N.S.-1 & N.S.-2)

For each of the items, the respondents are required to give their ratings on a 7-point rating scale ranging from minimum to maximum, against three separate questions. Thus, a typical item on the questionnaire looks like this:

The feeling of self-esteem a person gets from being in my job.

a) How much is there now?

b) How much should there be?

c) How important is it to me?

SCORING PROCEDURE

Two types of scores are available against each of the fifteen statements of the PNSQ. The first of these is need fulfillment deficiency. This is obtained by subtracting the response against the (a) item (How much is there now?) from the (b) item (How much should there be?) The second of these is the need importance score which is the rating on item (c) (How important is this to me?)
The need fulfillment deficiency scores and the need importance scores for each statement was averaged out for all the statements of the need category to which they belonged. Thus, for each need category, a need deficiency (D) score and a need importance (I) score for each respondent was obtained.
A total of 16 organisations were included in this study. The Human Resources/Personnel Departments of each unit were contacted before commencing data collection in that organisation. On the basis of the organisation chart/hierarchy presented by them, the different boss-subordinate groups to be studied were identified.

The two sets of questionnaires were separately administered to the bosses and subordinates. Complete anonymity was assured. The bosses were asked to give their responses on the EPPS (modified version), LEAD(Self), and the LBS(I). The group of subordinates working under each boss was requested to give their responses on the LEAD(Others) and LBS(II) in relation to how they perceive their boss and on the PNSQ in relation to themselves. The questionnaires were numerically coded in such a way, that it was possible to identify which group each respondent belonged to.

The raw data thus obtained from the above four questionnaires was inputed onto a computer system based on the LOTUS (spreadsheet) software and subjected to statistical calculations. These computations and the results obtained thereof are described in detail in the following chapters.