

CHAPTER 3

RESEARCH METHODOLOGY

This chapter describes the research methodology used in the study. The measuring instruments, sampling technique, data collection procedure, and the statistical techniques used in the analysis of the data are discussed here.

3.1 Measurement Instruments

Two measuring instruments were used in the study, one to measure absence from work and the other to measure sociocultural pressures and job satisfaction. They are discussed below.

3.1.1 Absence from Work

There is no standard formula for measuring absence from work. The United States Bureau of Labour Statistics uses the following formula :-

$$\text{Rate of absenteeism} = \frac{\text{Number of mandays lost during the period}}{\text{Average number of employees}} \times \frac{100}{\text{Number of scheduled working days during the period}}$$

As an example, if 900 mandays are lost through job absence during an 6-month period with 150 scheduled working days in a company with 200 employees, the absenteeism rate for the company during that period would be :-

$$\text{Rate of absenteeism} = \frac{900 \times 100}{200 \times 150} = 3\%$$

The formula above is the one used in this study. There are however other formulae which can be used to measure other aspects of absence from work. For example:-

(i) Measure of Frequency

a) Spells of absence = $\frac{\text{Number of episodes of absence in a year}}{\text{Average population at risk during the year}}$

b) Inception rate (persons) = $\frac{\text{Number of persons having one or more absence episodes in a year}}{\text{Average population at risk}}$

(ii) Measure of Severity

$$\begin{aligned} \text{a) Annual duration per person} &= \frac{\text{Number of calendar days lost in a year}}{\text{Average population at risk during the year}} \\ \text{b) Average length} &= \frac{\text{Number of days lost}}{\text{Number of absence episodes}} \end{aligned}$$

However, these formulae were not used here because they are not relevant for this study.

3.1.2 Sociocultural Pressures

A group of sociocultural pressures was used to measure the employees' desire to attend. The validity of this instrument is not known, although its reliability was tested in this study by means of a reliability analysis.

The group of sociocultural pressures is a self-reporting instrument comprising ten items. Following each item are four Likert-type responses, as follows :-

- 1 = strongly disagree
- 2 = disagree
- 3 = agree
- 4 = strongly agree

Factor scores can range from 1 to 4, while the individual scores can range from 10 to 40, with the neutral score at 25. To describe the level of desire to attend, the following scales describe respondents' mean scores for the degree of the desire to attend was strongly affected or affected or . A mean score of 1.00 - 1.50 indicates that the employees desire to attend was strongly affected; a mean score of 1.51 - 2.50 shows that the employees desire to attend was affected; a mean score of 2.51 - 3.30 shows that the employees desire to attend was not affected; and a mean score of 3.31 - 4.00 shows that the employees desire to attend was strongly not affected.

3.1.3 Job Satisfaction

Evans (1969) provides some useful insights on the measurement of job satisfaction. He noted five different aspects of job satisfaction, namely (i) overall job satisfaction, (ii) job facet satisfaction, (iii) goal attainment, (iv) goal aspiration, and (v) goal importance. For the purposes of this study, however, only two namely (i) overall job satisfaction and (ii) job facet satisfaction (which comprises five job facets, namely the employer, wages & benefits, coworkers, supervisor and the work itself) were examined by means of the Survey Research Attitude (SRA) employee inventory. This is because the other three aspects of job satisfaction were not relevant for this study.

The Survey Research Attitude (SRA) employee inventory provides a measure of employee attitudes towards the work environment. It is a diagnostic instrument identifying attitudinal levels for individuals and groups in such areas as those listed below:-

- (i) job demands;
- (ii) working conditions;
- (iii) pay;
- (iv) employee benefits;
- (v) friendliness;
- (vi) co-operation of fellow employees;
- (vii) supervisor-employee interpersonal relations;
- (viii) confidence in management;
- (ix) technical competence of supervision;
- (x) effectiveness of administration;
- (xi) adequacy of communication;
- (xii) security of job and work relations;
- (xiii) status and recognition;
- (xiv) identification with the organisation;
- (xv) opportunity for growth;
- (xvi) advancement; and
- (xvii) reactions to the inventory itself

The SRA employee inventory contains 66 items with a Likert Scale. Following each item are four Likert-type responses, as follows :-

- 1 = strongly disagree
- 2 = disagree
- 3 = agree
- 4 = strongly agree

The Likert Scale requires the respondent to indicate the degree of agreement or disagreement with each of the items. A score of 1 to 4 is assigned to responses corresponding from strongly disagree to strongly agree for positive items, whereas a score of 4 to 1 corresponds to responses negative items. The score can range from 66 (very dissatisfied) to 264 (very satisfied) with the neutral score at 165.

The range of the mean scores (from 1 to 4 points) for each of the job facets on the degree of satisfaction or dissatisfaction is shown in Table 3.1.

TABLE 3.1
RANGE OF MEAN SCORES FOR EACH JOB FACET

| Job Facet | Degree of Satisfaction/Dissatisfaction | | | |
|------------------|--|--------------|-----------|----------------|
| | Very Dissatisfied | Dissatisfied | Satisfied | Very Satisfied |
| Employer | 1.00-1.78 | 1.79-2.54 | 2.55-3.60 | 3.61-4.00 |
| Wages & Benefits | 1.00-1.66 | 1.67-2.66 | 2.67-3.66 | 3.67-4.00 |
| Coworkers | 1.00-1.99 | 2.00-2.99 | 3.00-3.90 | 3.91-4.00 |
| Supervisor | 1.00-1.99 | 2.00-2.55 | 2.56-3.55 | 3.56-4.00 |
| Work Itself | 1.00-1.66 | 1.67-2.66 | 2.67-3.90 | 3.91-4.00 |

3.2 Sampling Technique

This study focused on production operators, technicians and foremen in the manufacturing company concerned. Table 3.2 shows the sample drawn from the company's employee inventory list.

TABLE 3.2
SAMPLE SIZE

| Category | Sample Size | Population Size | Ratio |
|-------------|-------------|-----------------|-------|
| Operators | 385 | 2,579 | 15% |
| Technicians | 110 | 733 | 15% |
| Foremen | 24 | 164 | 15% |
| Total | 519 | 3,476 | 15% |

3.3 Data Collection Procedure

Data on absenteeism were collected from the company's attendance records. The production employees' absenteeism records from January to December 1994 were analysed in terms of the number of days the employees failed to report for scheduled work in 1994. The respondents' personal biodata, sociocultural pressures data, and job satisfaction data required for the study were collected through the use of a questionnaire. The questionnaire was

administered to the employees over a two week period by the section chief at the shopfloor.

The respondents were informed of the nature and purpose of the study. They were assured that their individual responses would not be made known to the company and given a guarantee of complete anonymity. To reassure the respondents of anonymity, they were requested to place their completed questionnaires in boxes placed at the entrance to the company cafeteria and the in-house hostel.

Each respondent was requested to complete a 76 item questionnaire. A 4-point Likert-type rating scale ranging from "strongly disagree" to "strongly agree" was used in the questionnaire.

3.4 Statistical Techniques

The personal biodata, sociocultural pressures data, and job satisfaction data were analysed using the Statistical Package for Social Sciences (SPSS) programme. The employee absenteeism records were generated from the company's computerised file system. The procedure for analysing the data is described below.

First, the raw data were edited by means of the frequency test. The purpose was to check the

completeness, eligibility and consistency of the data and to prepare the data for further analysis. The same statistical tool was used to observe the general characteristics of the respondents. Then, the data was tested for reliability in order to assess the consistency of the measures, that is, to ensure that the measures were free from errors and thus would yield consistent results. The SRA employee inventory appears to have adequate validity and reliability (Evans, 1969). However, the validity and reliability of the sociocultural pressures is not known. Other statistical techniques used on the data include mean and frequency analysis, reliability analysis, ANOVA and regression analysis.