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**THE UNIVERSITY OF MANITOBA
DEPARTMENT OF BUSINESS ADMINISTRATION**

**MANAGERIAL BEHAVIOR
A STUDY OF MANITOBA MANAGERS
BY
RAMESH CHANDRA GUPTA**

**A THESIS SUBMITTED TO THE FACULTY OF GRADUATE STUDIES
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Ramesh Chandra Gupta

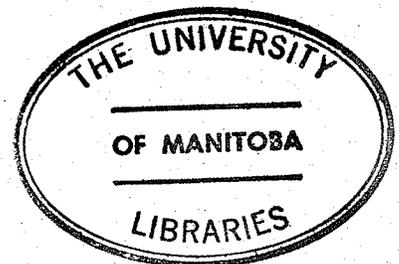
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of the degree of

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CHAPTER I
INTRODUCTION

CHAPTER I
INTRODUCTION

The present study was undertaken to assess and analyze certain aspects of managerial motivation in the private sector industries in the Province of Manitoba. The focus of the study is on a particular type of employee-manager. They are a large and diverse group with one common characteristic that all are held responsible for the job performance of persons other than themselves. In an expanding industrial society such as ours, the managerial role has achieved a level of importance that makes it a key job. The managers are in a position to influence complex enterprises that contain unparalleled human and physical resources. The pervasiveness, importance and complexity of the managerial job demands that we learn as much as possible about it. (Porter and Lawler, 1968)

Managerial studies quite often concentrate on the study of work motivation, primarily because work has always been and continues to be the major non-family activity that is undertaken by most individuals. A study of work motivation is of importance to industry, the community and the individual. The payoff to industry is in terms of increased productivity whereas to the community it is in terms of proper utilization of human resources and reduced psychological casualty.

In an organizational setting there exists an ongoing individual-organization interaction. The activities of the individuals should be directed towards the goals and the objectives of the organization. The organization rewards, for a successful interaction, must be adequate

to meet individuals needs and goals. The individuals expend effort based on their skills and abilities and according to their perception of performance and rewards. The individual needs and goals could be expectations about money in exchange for time at work; social need-satisfaction in exchange for work and loyalty; opportunities for self-actualization and challenging work in exchange for high productivity; quality work and creative effort in the service of organizational goals; or various combinations of these or other variables. The resources of the organization may or may not be adequate to meet all these expectations satisfactorily. The continued membership of an individual is based entirely on the successful interaction with the organization.

This study is concerned with some important aspects of individual-organization interaction. The three specific areas on which the study concentrated are (a) Need Fulfillment and Motivation (b) Job Characteristics and Motivation and (c) Occupational Stress and Manager's General Health. The results of the present study have implications for policy and organizational changes, as well as for the development, selection and training of the human resources. It has further implications for organizational resources, the reward system and organizational innovation.

NEED FULFILLMENT AND MOTIVATION

A well known instrument employed in the various need fulfillment studies is Porter's (1961) need satisfaction instrument. It is based on Maslow's need classification system and has been adopted

by others (Haire, Chiselli and Porter, 1966; Evan, 1966; Miller, 1966; Porter and Mitchell, 1967; Porter and Lawler, 1968; Rhinehart et al, 1969; Ivancevich, 1969; Hackman and Lawler, 1971; Blunt, 1973). The need fulfillment studies suggest that the higher the need discrepancy for any given need category, the higher will be the degree of dissatisfaction. Higher need discrepancy will result from either (a) low levels of existing need fulfillment or (b) high levels of desired need or (c) both.

In this study, five need categories, based on Maslow's hierarchy of needs, were incorporated. These needs, in order of the hierarchy, are security, social, esteem, autonomy and self-actualization. The questionnaire items and instruments used are described in detail in Chapter III. Manager's responses to specified questionnaire items were combined to develop measures of (a) Need Fulfillment (b) Need Discrepancy (c) Need Importance and (d) Higher Order Need Strength. The main focus of the study was on analyzing the need fulfillment or discrepancy levels for the various need categories amongst Manitoba managers. The data was analyzed to see if significant differences exist in manager's perception based on independent variables of the study such as levels of management, size of firm, age, etc. The objective, here, was to establish those areas where high need discrepancy exists for managers. The findings from this area of study were expected to have policy implications for the development, selection and training of human resources and organizational compensation policy.

JOB CHARACTERISTICS AND MOTIVATION

Numerous scholars (Argyris, 1964; Blauner, 1964; Davis, 1957; Friedmann, 1961; Guest, 1955; Herzberg et al, 1957; Walker, 1950) have shown that simple routine jobs often lead to high employee dissatisfaction, to increased absenteeism and turnover, and to substantial difficulties in effectively managing employees who work on simplified jobs. Additional studies (Turner and Lawrence, 1965; Hackman and Lawler, 1971; Brief and Aldag, 1975) indicate that a positive relationship exists between employee work motivation, satisfaction, performance and attendance on one side and some specific job characteristics on the other side. These job characteristics consist of such items as (a) variety - the degree to which a job required employees to perform a wide range of operations in their work (b) autonomy - the extent to which employees have a major say in scheduling their work (c) task identity - the extent to which employees do an entire or whole piece of work and can clearly identify the results of their efforts and (d) feedback - the degree to which employees receive information as they are working which reveals how well they are performing on the job.

In this study, instruments were selected to measure a manager's perceptions about the existing degrees of variety, autonomy, task identity and feedback in their jobs. The data were analyzed to see if a manager's perception is affected by such variables as levels of management, size of firm, age, etc. The questionnaire items and the instruments adopted, are presented in Chapter III. They

provide measures of (a) core-dimensions - variety, autonomy, task-identity and feedback (b) specific satisfaction and (c) job-design. The objective, here, was to establish the job characteristics which could be emphasized to increase managerial motivation. The findings from this area of study were expected to have policy implications for organizational innovation and changes.

Another measure of job satisfaction is the Job Descriptive Index (Smith, Kendall and Hulin, 1969; Herman and Hulin, 1973; Brief and Aldag, 1975; Gillet and Schwab, 1975). JDI measures satisfaction with five areas of a job; the type of work, the pay, the opportunities for promotion, the supervision and the co-workers on the job. In the Manitoba study, JDI was employed to study a manager's perception of these areas of his job. Here again, managerial perceptions were related to the independent variables of the study - levels of management, size of firm, etc. The questionnaire items and the instruments adopted are presented in Chapter III.

OCCUPATIONAL STRESS AND GENERAL HEALTH

In the Manitoba study, questions on occupational stress and general health were included because of the implications that job dissatisfaction may contribute to heart disease. A recent report (Upjohn, 1973) notes that work role, work conditions, and other social factors may contribute about 75% to the risk factor leading to heart disease. In the present study, occupational stress was measured by incorporating the job-related

tension index used by Kahn, Wolfe, Quinn and Snoek (1964). Questions on general health (Dunn and Cobb, 1962; Tannenbaum et al, 1974) were selected to investigate the relationship between hierarchical status and manager's health in the organizations studied. The questionnaire items selected and the instruments adopted are presented in Chapter III.

This area was included in the study with the objective of examining the relationship between job dissatisfaction and occupational stress for a sample of Manitoba managers.

VARIABLES OF THE STUDY AND ANALYSIS

Table I summarizes the proposed area of study. The following independent variables were selected for study. They are described in detail in Chapter III.

- (a) Level of Management - Senior and Intermediate
- (b) Size of Firm - Large or Medium
- (c) Early life - Urban and Rural Background
- (d) Age - Younger or Older
- (e) Level of Education - Low or High

Major propositions, as given in Chapter III, were formulated based on these independent variables to examine differences in manager's perception about dependent variables in the following areas.

- (a) Need Fulfillment, Need Discrepancy and Need Importance
- (b) Higher Order Need Strength
- (c) Core-Dimensions of Variety, Autonomy, Task Identity and Feedback.

- (d) Job-design as a measure of job characteristics
- (e) Job Descriptive Index as a measure of satisfaction
- (f) Specific satisfaction as a measure of satisfaction
- (g) Occupational stress

The differences in manager perceptions were tested for statistical significance at the 0.05 level using either the Mann-Whitney U-Test or two-tailed t-test.

In addition, suggestive inferences were drawn for differences in manager's perception of dependent variables based on four key areas of management - General Management, Marketing and Sales, Finance and Accounting and Production.

The complete questionnaire is given in Appendix A and is discussed in Chapter III. Table 2 gives the nature of the industry and the number of respondents selected for study. The data was analyzed using the computer facilities at the University of Manitoba. The Statistical Package for Social Sciences, 2nd edition (1975) was extensively used. Some programs were run using the Manitoba Statistical Package particularly to perform the Mann-Whitney U-test for specific sets of data. The results of the study are presented in subsequent chapters as follows:

In Chapter II a comprehensive review of the literature is presented to gain an insight into earlier work done in the fields of Need Fulfillment, Job Satisfaction and General Health. Based on the literature review, appropriate questionnaire items were selected for the study and various instruments were designed for the analysis of the data, as

presented in Chapter III. The first part of the questionnaire dealt with assembling personal demographic data from the respondents such as sex, age, levels of education, length of service, income and fringe benefits, etc. Based on the results from this part a typical profile of the Manitoba manager was developed and is presented in Chapter IV. The results from this part also gave the statistics for the independent variables of the study such as the number of managers for each, levels of management, size of firms, age, education level and rural/urban background. The results from the Need Fulfillment and Need Discrepancy area are presented in Chapter V. After analyzing manager's perception about the various need categories the emphasis of the research shifted to job characteristics. These were analyzed using the concepts of core-dimensions and JDI and the results of the analysis are presented in Chapter VI and VII respectively. The area of general health was analyzed last. This was done to see if meaningful relationships or trends were prevalent in terms of managers occupational stress and need discrepancy. The results are given in Chapter VIII. Chapter IX summarizes the conclusions of the study, ties in some of the policy implications and suggestions for future research.

TABLE 1

MANAGERIAL BEHAVIOR: A STUDY OF MANAGERS IN MANITOBA

<u>SETTING</u>	<u>ATTRIBUTES</u>	<u>POSITION</u>	<u>STUDY AREA</u>	<u>IMPLICATIONS FOR POLICY</u>
<u>Bureaucracies</u>	<u>Personal attributes</u>	<u>Organizational hierarchy and size</u>	<u>Need fulfillment and Satisfaction</u>	<u>Assessment of Managers Interest for</u>
	Sex		security	self
	Age	<u>Level of Management</u>	social	organization
Private Industry	Marital Status	senior	esteem	large public
(a) Medium Size	Education	intermediate	autonomy	interest
(b) Large Size	Years in service	<u>Annual sales/budget</u>	self-actualization	<u>Need discrepancy and</u>
	<u>Socialization</u>	<u>Salary</u>	<u>Job Design</u>	<u>Job dissatisfaction</u>
	1. Early residence	basic	<u>Job Description Index(JDI)</u>	importance of
	2. Regional affiliation	incentive plans	work	certain needs
	3. Personal attributes	fringe benefits	pay	possible moti-
	4. Club Association	<u>Career</u>	promotion	vational strategies
	5. Media Exposure	seniority	supervision	<u>Areas of concern for</u>
	#magazines read	job mobility	co-workers	<u>the Organization</u>
		specialization or	<u>Occupational Values</u>	organizational
		professionalization	<u>Occupational Stress and</u>	stress
		<u>Areas of management</u>	<u>General Health</u>	general health
		general management	<u>Extrinsic Rewards and Job</u>	
		marketing and sales	<u>Performance</u>	
		financial and	basic-salary	
		accounting	monetary compensation	
		production	fringe benefits	

TABLE 2

MEDIUM & LARGE SIZE FIRMS
NATURE OF INDUSTRY AND DISTRIBUTION OF RESPONDENTS

<u>Nature of Industry</u>	<u>Medium Size Firms</u> (51-100)	<u>Large Size Firms</u> (201-500)
Agricultural Implements, Heavy Machines and Equipment (302, 303, 304, 309, 311, 315, 321, 333, 372, 393).*	56	36
Clothing and Textiles (175, 186, 189, 243, 244).	32	20
Construction Materials (353, 354, 359).	13	19
Electronics, Scientific and Professional Equipment (268, 324, 325, 335, 375, 391).	28	19
Food and Beverages (101, 104, 108, 109).	26	39
Furniture (261, 266).	29	4
Lumber, Pulp and Paper (251, 254, 256, 273, 274, 328, 373).	13	22
Printing (286, 289).	<u>27</u>	<u>-</u>
TOTALS	<u>224</u>	<u>159</u>
	GRAND TOTAL	383

* Numbers in parenthesis are the Standard Industrial Classification.

CHAPTER II
LITERATURE REVIEW

CHAPTER II
LITERATURE REVIEW

One has to organize in order to manage an enterprise, so as to produce with increasing efficiency goods and services for the society at large. The dominant form of human organization employed throughout the industrial world is a unique and extremely durable social arrangement called 'bureaucracy' - a social invention perfected during the industrial revolution to organize and direct the activities of a business firm. Today it is the most prevailing type of organization where people direct concerted efforts towards the achievement of some goal. This holds for university systems, for hospitals, for large voluntary organizations, business and for governments.

According to Weberian theory of bureaucracy (Weber, 1947) bureaucracies are organized hierarchically with a strict chain of command from top to bottom. They create an elaborate division of labor, by assigning specialized roles to their personnel to an extent that often seems to reduce the individual to the status of a small cog in the vast machinery of the whole organization. In addition there are detailed general rules and regulations which govern all conduct in the pursuit of official duties, and personnel are selected primarily on the basis of competence and specialized training rather than according to prerogatives of birth and privilege. Office-holding in a bureaucracy, tends to be a life-long vocation (Thompson, 1956; Blau and Scott, 1962).

The bureaucratic 'machine-model' was developed as a reaction

against the personal nepotism, subjugation and cruelty and the subjective and capricious judgements which passed for managerial practices during the early days of the industrial revolution. Bureaucracy emerged out of the need for order for the organizations and worker's demand for fair treatment. It came as an organizational system ideally suited to the values and demands of the victorian era.

Four major changes have occurred in our society which challenge both the production and social sub-systems of organizations (a) a break, at first gradual and now pronounced, with traditional authority and the growth of democratic ideology (b) economic growth and affluence (c) the resultant changes in needs and motivation patterns and (d) the accelerated rate of change (Katz and Georgopoulos, 1971).

Bennis (1966) considered the bureaucratic pyramid as obsolete. He suggested a more flexible structure for the future to meet the demands of our changing society. The core problems facing an organization were considered as (a) integration (b) social-influence (c) collaboration (d) adoption and (e) revitalization. He considered bureaucracy was (in some sense it still is) a suitable social arrangement for routine tasks of the 19th and 20th century but not for today's uncertain and dynamic environment. It is suggested that the conditions which will govern the organization life in the next two or three decades are (a) the environment (b) population characteristics (c) work values and (d) tasks and goals. The social structure of the organizations will have some unique characteristics. The key word will be 'temporary'. There will be rapidly changing, adaptive, temporary systems. These

will be task forces organized around problems - to be solved by groups of relative strangers with diverse professional skills. The group will be arranged as an organic rather than a mechanical model. They will evolve in response to a problem rather than to programmed role expectations.

INDIVIDUAL IN THE ORGANIZATION

To understand why people behave the way they do in organizations, one needs to make some basic assumptions about the nature of human beings; assumptions about what people seek and what they avoid, how people decide what they will do and what they are capable of doing, and so on. A number of 'ready-made' models of man exist in the field of psychology and philosophy, and have been described in detail elsewhere, Porter et al (1975). In this section only economic versus self-actualizing man has been described.

Economic Versus Self-actualizing man - Many early writers on organizational theory and management practice, conceptualize man in strictly economic terms. He is a rational being and uses his reason primarily to calculate exactly how much satisfaction (money) he may obtain from the smallest effort. He is naturally competitive, is self-interested and in the battle of life, strives hard to outwit every other man. His sole concern is his own survival (Brown, 1954). Taylor's scientific management uses this concept as central to its development. The twin design principles of specialization and standardization lead to creation of jobs which are simplified and repetitive, and can be performed by almost anyone after a short period of training. The highly paid

assembly-line job is a classic illustration of a job so designed. If people cared only about issues which were economic, they should find these jobs very satisfying. Unfortunately, people who work on such routine specialized and simplified jobs usually are not well satisfied (Blauner, 1964; Shepard and Harrick, 1972; Upjohn Institute, 1973). This has cast considerable doubt on the general usefulness of a strict economic model of man in an organizational setting.

The self-actualizing view of man is, in many ways, directly opposed to the concept of economic man. Such psychologists as McClelland, White, and Maslow note that many people seem to be motivated by the opportunity to increase their competence and to grow and develop as individuals. It is concluded that man cannot be described adequately in terms of physiological or economic considerations. It is suggested that he strives towards such ideas as self-fulfillment and self actualization. Maslow (1943), for example, describes self-actualization as follows:

Even if all these (lower-level) needs are satisfied, we still may often (if not always) expect that a new discontent and restlessness will soon develop, unless the individual is doing what he is fitted for. A musician must make music, an artist must paint, a poet must write, if he is to be ultimately happy. What a man can be he must be. The need we may call self actualization . . . (self-actualization) refers to the desire for self-fulfillment, namely, to the tendency for one to become actualized in what one is potentially. This tendency might be phrased as the desire to become more and more what one is, to become everything that one is capable of becoming.

Man is more complex than the 'ready-made model' portrays him to be (Schein, 1970). Organization and management theory has

tended toward simplified and generalized conceptions of man. Empirical research has consistently found some support for the single generalized conception, but only some. The major impact of many decades of research has been to vastly complicate our models of man, of organizations and of management strategies. Man is not only more complex within himself, being possessed of many needs and potentials, but he is also likely to differ from his neighbor in the patterns of his own complexity. It has always been difficult to generalize about man and it is becoming more difficult as society, and organizations within society, are themselves becoming more complex and differentiated. According to Schein this complexity can be justified on the basis of the following assumptions.

1. Man is not only complex but also highly variable.
2. Man is capable of learning new motives through his organizational experiences, hence ultimately his pattern of motivation and the psychological contract which he establishes with the organization is the result of a complex interaction between initial needs and organizational experiences.
3. Man's motives in different organizations or different sub-parts of the same organization may be different; the person who is alienated in the formal organization may find fulfillment of his social and self-actualization needs in the union or in the informal organization; if the job itself is complex, such as that of a manager, some parts of the job may engage some motives while other parts engage other motives.
4. Man can become productively involved with organizations on the basis of many different kinds of motives; his ultimate satisfaction and the ultimate effectiveness of the organization depends only in part on the nature of his motivation. The nature of the task to be performed, the abilities and experience of the person on the job, and the nature of the other people in the organization all interact to produce a certain pattern of work and feelings. For example, a highly skilled but poorly motivated worker may be as effective and satisfied as a very unskilled but highly motivated worker.

5. Man can respond to many different kinds of managerial strategies, depending on his own motives and abilities and the nature of the task; in other words, there is no one correct managerial strategy that will work for all men at all times.

Man has many different needs - Needs are generally used to refer to clusters of goals or outcomes a person seeks. In the context of an organization, the following needs (similar to the listing by Maslow 1954) are generally suggested.

1. A number of existence needs - including sex, hunger, thirst and sleep.
2. A security need - job security, order, protection against danger
3. A social need - identification, love, group interaction
4. A need for esteem and reputation - self-respect, success, status
5. A need for autonomy and independence
6. A need for competence, achievement and self-actualization

Although several theorist have proposed theories which have needs arranged in a hierarchy, Maslow's (1943, 1954) work has been the most influential. According to him, a man moves successively only if his existence needs, his security needs, his social needs, and so on are well satisfied. It is also implied that if a lower-level need is threatened, it will again become potent and the person will reduce his efforts to satisfy all higher-order needs. Furthermore, a satisfied need, according to Maslow, is not motivating. There is strong evidence to support the view, that unless the existence needs are satisfied, none of the higher-order needs will come into play. There is also some evidence to indicate, that unless the security

needs are satisfied, people will not be concerned with higher-order needs (Cofer & Appley, 1964; Alderfer, 1972). There is, however, little evidence to support the view that a hierarchy exists once an individual moves above the security level (Lawler & Suttle, 1972). It appears safe to assume that a two-step hierarchy exists, with existence and security needs at the lower level, and all the higher-order needs at the next level. Also, it can safely be assumed that unless the lower-order needs are satisfied the higher-order needs will not come into play. However, it has not been established as to which higher-order need or needs (or in what order) will become salient after the lower ones are satisfied. While a person might be motivated by either a set of higher-order needs or a set of several lower-order needs, it is less likely that a person will be motivated simultaneously by both sets, (Porter et al, 1975).

There is a substantial amount of research which indicates that as needs are satisfied they become less important and other needs emerge. This is generally true except for self-actualization need. This need, unlike others, appears to stay important (Alderfer, 1972). In fact, the more it is satisfied the more important it becomes. The only thing which makes this need lose its importance, is a threat to the satisfaction of a person's lower level need. Thus, once the self-actualization need appears, it stays and continues to be a strong motivator.

The outcomes, which satisfy the needs, can be both intrinsic and extrinsic. A number of research studies show that certain types of outcomes (e.g. events, objects, behaviors) are useful in satisfying several different needs. Pay is the classic example. It appears to

satisfy not only existence needs, but security and esteem needs as well (Lawler and Porter, 1963; Lawler, 1971).

Some writers have speculated that the strength of various needs, in the population in general, has been changing over the past several decades. Unfortunately, there is insufficient evidence to either support or refute this view. Some data, however, suggests that higher-order needs have become more important. It has been shown that younger managers place greater importance on self-actualization needs than do older managers (Porter, 1963). This may be a function of age, but it could also be due to a higher education level of these managers and the fact that many of them have never experienced a threat to their existence needs.

Large differences in the nature of man's needs are evident and must be considered when viewing the individual in the organization. These differences lead to individuals seeing different things when they perceive the same job and to their performing their jobs differently. Because of these differences, a job which is satisfying and motivating to one person will often be seen as boring by another. Similarly, the pay system which will motivate one person is often seen as irrelevant by others, simply because the rewards provided by the pay system are valued differently by different people.

Alderfer (1972) presented a conceptual and empirical system for understanding, explaining and predicting the satisfaction and desire properties of human needs. He called it existence, relatedness and growth (ERG) theory. Each of the basic needs in the ERG theory is defined in terms of a target toward which efforts at gratification

are aimed and in terms of a process through which satisfaction can be achieved. Based on the theory he hypothesized a curvilinear relationship between relatedness, satisfactions and desires and confirmed the relationship in subsequent studies (Alderfer, 1975).

Selection of Plans - The expectancy theory, which was originally formulated by Tolman and Lewin in the 1930's, has recently been usefully applied to behavior in organizational settings (e.g. Vroom, 1964; Porter and Lawler, 1968). In essence this model posits that the motivational force to engage in a behavior, is a multiplicative function of (a) the expectancies the person holds about what outcomes are likely to result from that behavior and (b) the valence of those outcomes. In symbols

$$MF = E \times V$$

where MF = motivational force

E = Expectancy

V = Valence

Thus, if the behavior one is considering, is 'working hard on the job', one needs to do the following to predict the effort exerted by an individual on his job.

1. Identify the outcomes the individual expects as a consequence of working hard. Most people consider fewer than six or seven salient outcomes for any contemplated behavior.
2. Determine the degree to which the individual is sure that each outcome will result from engaging in the behavior. Estimates of confidence can be made on a probability scale from zero to one.
3. Determine the valence of each of the outcomes for the individual. Valence can be assessed on any scale which is symmetrical around zero: for example -3 to +3, -1 to +1 and so on. The only requirement

is that it be possible to determine whether the individual finds each outcome attractive, unattractive or zero. The valence associated with a given outcome is determined jointly by (a) the degree to which the outcome is directly need-satisfying itself and (b) the degree to which it leads to other outcomes which have valence.

4. Multiply the expectancy and the valence of each outcome and then add the resulting products. The figure that results will indicate whether
 - (a) the individual has a basic tendency to engage in the behavior (positive number)
 - (b) the individual has a basic tendency to avoid engaging in the behavior (negative number)
 - (c) the individual is indifferent about whether or not to engage in the behavior (zero)

To make actual predictions of behavior, however, it is usually necessary to know how the motivational forces, towards engaging in various alternative and possible behaviors, compare.

Most researchers who have applied this theory to work situations, have asked employees to report on their valences and expectancies. While there are some technical difficulties associated with exact formulations of expectancy theory, there seems to be widespread research support for the utility of a general expectancy - theory approach to understanding the behavior of people in organizations.

It should be emphasized that the expectancy theory model applies only to behaviors which are under the voluntary control of the individual. In relation to work performance, an individual has voluntary control over.

1. the amount of effort and energy he puts into his work activities (intensity of person's work activities)
2. the performance strategies or approaches he uses in going about his work. (direction of these activities)

For example, a person's decision about whether to work hard or take it easy on the job is a decision about effort. His decision about whether to try to do high quality work or to produce large quantities of work instead, is a decision about strategy. Strategy considerations are more important in many complicated higher level jobs.

INDIVIDUAL-ORGANIZATION INTERACTION

Psychologists have been studying the interaction between the work and workers for over half a century. Munsterberg's (1913) original textbook serves as a landmark as it indicates the start of the psychologist's concern with work behavior. Initially, the emphasis was on techniques of personnel selection and placement and upon problems of improving physical aspects of the work situation. The late 1930's saw an increase in interest towards studies of the attitudes of employees and their relationship to employee behavior. Hawthorne's studies (Roethlisberger and Dickson, 1939) provided the strongest stimulant for this switch in emphasis. The importance of the individual's attitudes and feelings about their work was emphasized further by the work of Lewin (Lewin, Lippit and White, 1939) and Coch and French (1948). By the late thirties and early forties it became acceptable to study things like job satisfaction and importance of work factors.

The study of worker's attitudes developed very rapidly. By the mid-fifties Herzberg et al (1957) were able to find several hundred studies of worker's job attitudes. It is not surprising that industrial psychologists have devoted so much attention to this topic, because, as Tannenbaum (1966) pointed out, job attitudes are a distinctly psychological

variable. Herzberg et al also found a number of studies, as did Brayfield and Crockett (1955), that focused upon the relationship between worker's job attitudes and their job behavior. These reviews also cite a number of studies of absenteeism and employee turnover. Studies looking at manager's job attitudes, however, were almost entirely missing in this review. The early 1960's mark the beginning of the large-scale studies of manager's job attitudes. Some such studies are briefly summarized in the previous section. Before commenting further on current empirical studies, some theoretical concepts will be reviewed.

Organizations are characterized by (a) orientation towards goals or objectives (b) differentiated functions within the organizations and (c) rational co-ordination of the various subsystems of the organizations. Organizations must, to some extent, develop and use a system of control which ensures that (a) activities of the members are directed towards goals of the organization (b) organization members, who have the responsibility for specific functions, actually do perform those functions and (c) explicit means of co-ordinating, among individuals and sub-units provide to the employees (i) expectations as a consequence of their membership and position and (ii) resources.

To ensure that demands or expectations, that organizations place on individuals, are experienced and responded to by them, various formal mechanisms are used:

1. Selection System - only those selected who can meet the expectations of the organization.
2. Socialization and Training.
3. Evaluation and Reward.
4. Measurement and Control System.

5. Supervisory Practices.

The individual or employee characteristics are as follows:

(a) His needs and goals, such as - what is his orientation towards achievement and growth, how much he cares about achieving important social or status satisfactions and what are his career aspirations in terms of maintaining his job security. These are described in detail in an earlier section. (b) His skills and energies - he has more control on the amount of energy but less on the skill. Two individual employees holding the same job within an organization may have very different orientations. Their preference for extrinsic (salary, security, interpersonal climate, etc.) and intrinsic factors (responsibility, opportunity for growth, independence) may differ, consequently they may derive different levels of satisfaction from what the job offers them and thus may be differentially motivated on the job according to the expectancy theories of motivation. (Vroom, 1964; Porter and Lawler, 1968; Graen, 1969; Campbell et al, 1970; House, 1971; Lawler, 1971). Assessment of work motivation requires not only finding out what the job offers to an employee, but also incorporates an assessment of employee orientation and values towards the job outcome. Korman (1971) has suggested that orientations towards job factors may stem primarily from the influence of the reference group to which employees belong. It is interesting to note that Bobbitt et al (1974) have suggested that another organizational dysfunction-goal displacement occurs, when activities and values originally intended for use in attaining end goals become ends in themselves - or are adapted to ends other than those for which they are intended. This further

complicates the organization - individual interaction.

THE DECISION MAKER - MAN AT THE TOP

In the present study the emphasis is on a particular type of employee - manager. The manager's job is a pivotal job. It is a link between the workers and the top levels of the organization. It also is a link with the various elements of the environment around the organization. The manager's role is to mediate between the technical sub-organization under him and the environment outside, over which he has little or no control. In the case of a technical sub-organization, he decides such matters as the broad technical task which is to be performed, the scale of operations, the employment and purchasing policy, etc. There is some certainty and rationality. In the case of environment around the organization he must be flexible and adaptable.

There is of course, an important reason for studying managerial motivation. Increased knowledge in this area may lead to applications that improve the productivity of the organization. Although enough data exists in the literature about the attitudes and behaviors of workers, yet very little research has been carried out on the manager's job attitudes. It is somewhat surprising, that managers have not been that well studied since they represent a highly significant, and visible part of the work force of any organization. In addition, there are important reasons for believing that, since managers find themselves in a considerably different psychological environment from that of the workers, the same kinds of behavior relationships that exist at the worker level, may not necessarily hold at the managerial

level. Likert (1961) has, for example, hypothesized that job satisfaction may be more closely related to managerial performance than it is to worker performance.

It seems that the early 1960's were the beginning of large scale studies of manager job attitudes. Studies by Rosen and Weaver (1960) and Porter (1961) perhaps are the best signals of the start of the trend. Managers are indeed an identifiable group whose attitudes are worth study in their own right, independent of the attitudes of workers (Porter and Lawler, 1965; Vroom 1966). Most of the studies prior to 1964 did not involve individuals with supervisory responsibilities. A few studies looked at first level supervisors and their job attitudes, but none studied the job attitudes in relation to performance. Since that time quite a few studies have been carried out to study the need satisfaction of managers in the industry. Limited data exists for the public sector managers. These studies are reviewed in the next section.

OCCUPATIONAL STRESS

One of great inherent needs of any organization is dependability of role performance. The more complex and specialized the organization becomes, the greater becomes the degree of interdependence and the need for conformity to the requirements of organizational role. The need for conformity calls for influence over member behavior. To the costly ideology of bureaucracy conformity, is added the irony of conflicting and ambiguous directions. There are also requirements to produce innovative solutions to problems for which routine and precedent

are lacking. Most significant, for problems of conflict and ambiguity, is a climate that prescribes extreme leniency, tolerance and nurturance. It permits the focal person a great deal of freedom, but it also burdens him with greater responsibility for his decisions. It exposes him to attempts at correction from outside his immediate work group and presents him with problems trying to live successfully in two organizational worlds. Sufficient organizational stress may produce neurotic symptoms even in those who show little predisposition to neurotic anxiety (Kahn, Wolfe, Quinn and Snoek, 1964). Some of their applicable research findings are:

1. High job status brings high level of tension. It is more prevalent at middle management level than at the top. (It could be because of the unsatisfied mobility aspirations of the middle level managers. They also experience the role conflict more often)
2. Individuals in high status jobs report themselves in excellent health more frequently than those in the occupation of lower levels. This confirms a previous finding by Kasl and French, (1962).

Dunn and Cobb (1962) carried out a study on the frequency of peptic ulcers among executives, craftsmen, and foremen and they report that the foremen show consistent evidence of a greater frequency and severity of peptic ulcer than do craftsmen or executives. They did not find any evidence to support the widely held notion, that executives have an unusual prevalence of ulcer disease. Srivastava and Sinha (1972) in a study of semi-skilled blue-collar workers in a textile mill in India concluded that an inverse relationship exists between job anxiety and job satisfaction. Welford (1974) discussed the effects on performance of varying types of stress deriving from, imbalance

between capacity and the demands of tasks, environmental conditions and the social situations which either overload or underload the individual. Ronan et al (1974) did not find any substantial relationship between mental health and job satisfaction. They hypothesized that the relationship between mental health and job satisfaction exists only on the lower skill routine work level.

OCCUPATIONAL VALUES

Ondrack (1973), in a study carried out on graduate students, presented a set of contemporary occupational values in a rank order. It was found in the study that there exists a strong emphasis on independence and individual achievement. These values suggest that near-entrepreneurial job designs would be satisfying to contemporary managers. These values are:

1. Challenge in work
2. Good salary
3. Quality of peers
4. Opportunity for achievement
5. Independence
6. Individual responsibility
7. Socially useful work
8. Individual recognition
9. Opportunity for travel
10. Working conditions
11. Status
12. Opportunity for advancement
13. Opportunity for personal growth
14. Personal life
15. Equitable company policies
16. Good supervision
17. Good relations with subordinates
18. Security
19. Good relations with superior

The purpose of the above study was to obtain a current sampling of occupational values among students and to compare them to values found

by Kilpatrick (1964). These values reflect the shifts described by Ondrack (1971) and Minor (1971). The nature of the shift in occupational values was described as follows, contemporary students are no longer interested in conventional careers working their way through the administrative hierarchy of an organization, especially a bureaucratic organization. They reject authoritarian supervision and show a strong preference for a consultative-participative relationship with their supervisors. They reject narrow, closely defined jobs and prefer work situations which allow for independence, individual responsibility, achievement and recognition. Finally they prefer to work with co-workers with skill and competence equal to theirs, in a co-operative team relationship and or as a group of colleagues, rather than in an interpersonal competitive relationship. This is in many ways an idealistic group of occupational values. To the extent large scale organizations are bureaucratic and authoritarian, a fundamental incompatibility may develop between occupational values of contemporary students and organizational jobs and environments, and may imply modifications in organizational structure and managerial practice.

It was in this context that in the present study some selected occupational values were incorporated to study the managerial preferences for Manitoba.

CONCEPTUAL FRAMEWORK

Figure 1 shows a model of individual performance on organizations, as presented by Porter, Lawler and Hackman (1975). It shows an overview of major classes of variables which affect individual behavior in

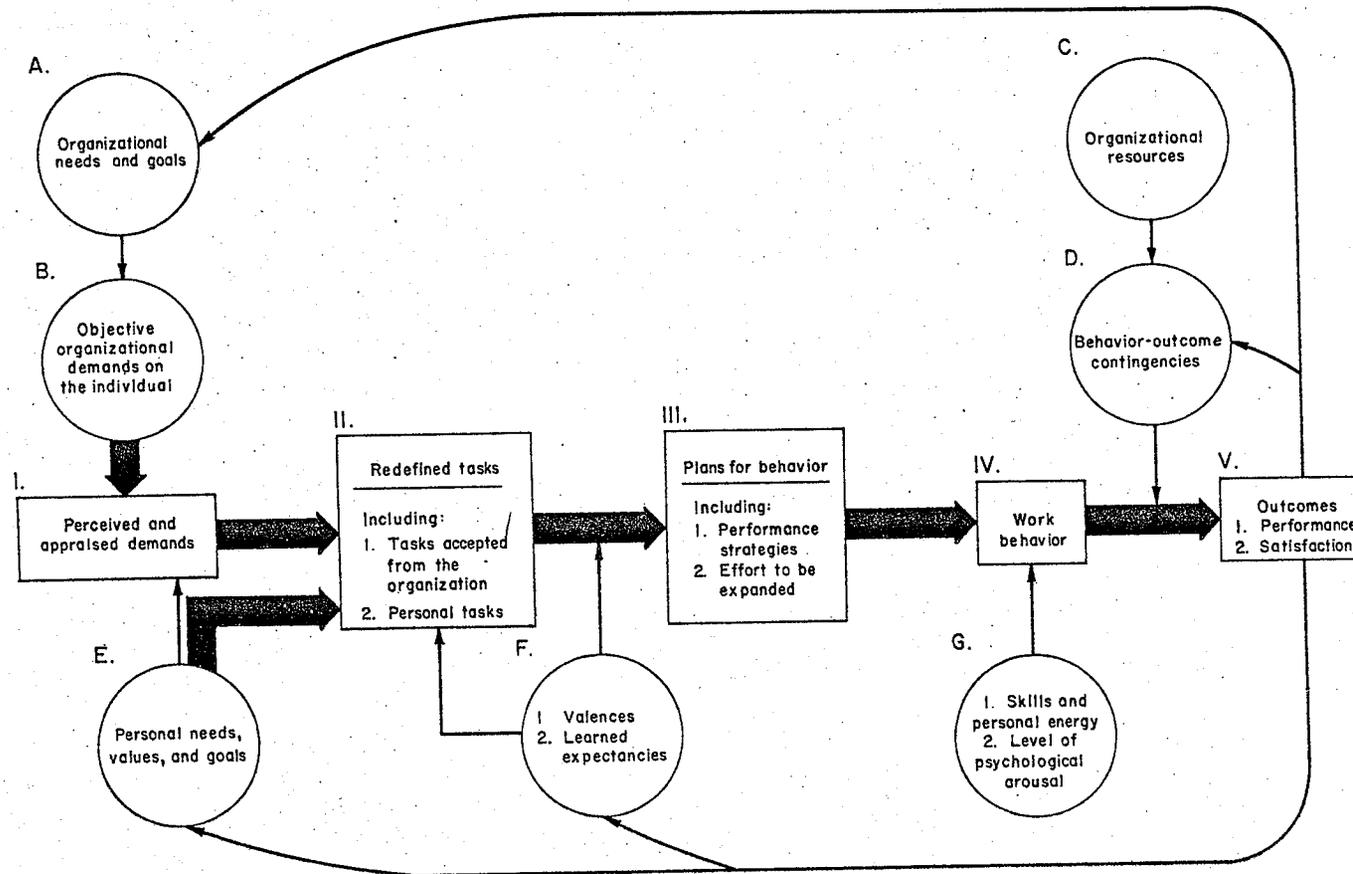


FIGURE 1. A MODEL OF INDIVIDUAL PERFORMANCE IN ORGANIZATIONS.
 (ADAPTED FROM PORTER ET AL, 1975)

organizations and it shows how these variables interact to determine the behavior of individuals in the organizations. The following variables are emphasized in the model:

1. Circles A and B represent the objective demands, expectations and requirements placed on individual organization members by agents of the organization as a whole. These derive from the overall goals of the organizations and its requirement that large numbers of people operate in concert to obtain these goals.
2. Circle C shows the resources which are controlled by the organization. Circle D represents the behavior - outcome contingencies established by the organization which specifies the circumstances under which these resources are given to individual members.
3. Circle E indicates the personal needs, values and goals of the individuals. These variables were seen as influencing (a) the way organizational demands are experienced by the individual (b) the likelihood that organizational demands will be deliberately redefined by the individual before execution and (c) the nature of the personal tasks or goals the individual will set for himself in the course of his organizational activities.
4. Circle F emphasizes the valences the individual has for various organizational outcomes and the expectancies he has learned about the circumstances, under which he will and will not receive various outcomes. Valences are yet another reflection of personal needs and values of the individual as applied to outcomes which can be obtained at work. Expectancies are more cognitive in nature and are subject to considerable revision on the basis of the individuals experiences in the organization.
5. Circle G incorporates, the level of an individuals' skill, the amount of personal energy available and the level of psychological arousal the individual experiences at work. These characteristics of the individual directly affect the work behavior he actually exhibits. They are not directly under the voluntary control of the individual and therefore are viewed as moderating the degree to which his behavioral plans are actually realized.

This model is explicitly cyclic and systematic in nature and the actions of individuals and of organizations continuously feedback upon and influence each other. In

the light of this conceptual framework we will now revert back to some recent empirical studies on work motivation, need fulfillment, job satisfaction and performance, with emphasis on managerial job.

RECENT EMPIRICAL STUDIES - JOB SATISFACTION AND PERFORMANCE

It has been shown by numerous scholars (Argyris, 1964; Blauner, 1964, Davis, 1957; Friedmann, 1961; Guest, 1955; Herzberg et al, 1957; Walker, 1950) that simple routine jobs often lead to high employee dissatisfaction, to increased absenteeism and turnover, and to substantial difficulties in effectively managing employees who work on simplified jobs. Partially in response to the above findings, various experiments with job enlargement have been successfully reported in the literature (Biganne and Stewart, 1963; Conant and Kilbridge, 1965; Davis and Valfer, 1965; Pelissier, 1965). These, with few exceptions, were case studies and often have lacked appropriate experimental controls. Hulin and Blood (1968) review the literature on job enlargement in detail and point out possible difficulties in procedure and methodology which may cast doubt on the validity of the findings reported.

Some progress towards the development of theory for job design has been made in recent years. The well known two-factor theory of Herzberg can be used to derive general propositions regarding conditions on the job which will be satisfying and motivating to employees. It suggests that a job providing opportunities for a) achievement b) recognition c) responsibility d) advancement and e) growth in competence, should enhance employee motivations. These principles have given rise to generally successful job enlargement

experiments in the American Telephone and Telegraph Company. Unfortunately, a number of researches have been unable to provide support for some of the major tenets of the theory, from which the principles used in AT & T studies were derived (Dunnette, Campbell and Hakel, 1967; Hinton, 1968; King 1970; Sarveswara Rao, 1973).

The problems of measuring job characteristics have been explicitly and carefully dealt with by Turner and Lawrence (1965). They developed operational measures of six 'requisite task attributes', which on the basis of a review of existing literature, were predicted to be positively related to worker satisfaction and attendance. They are a) variety b) autonomy c) required interaction d) optional interaction e) knowledge and f) responsibility. Examination of the relationship among the six requisite task attributes for 47 jobs revealed, that the attributes were very closely related to one another. They formulated a summary measure called Requisite Task Attribute Index (RTA Index) by formulating a linear combination of six separately measured attributes. This index was used in ascertaining the relationship between the attributes of the jobs and worker job satisfaction and attendance. However, the expectation, that employees working on jobs which were high on RTA index would have higher job satisfaction and lower absenteeism, has not been fully supported (Blood and Hulin, 1967).

Hackman and Lawler (1971) working on the basis of the expectancy theory of motivation suggested the following five propositions:

1. To the extent that an individual believes that he can obtain an outcome he values by engaging in some behavior or class of behaviors, the likelihood that he will actually engage in that behavior, is enhanced.

2. Outcomes are valued by individuals to the extent that they satisfy the physiological or psychological needs of the individual. People frequently strive for satisfying states of affairs which are quite inconsistent with their long-term well being (Locke, 1969).
3. Thus, to the extent that conditions at work can be arranged so that employees can satisfy their own needs best by working effectively toward organizational goals, employees will in fact tend to work hard toward the achievement of these goals (McGregor, 1960).
4. Most lower level needs can be satisfied continually in contemporary society and therefore will not serve as motivational incentives except under unusual circumstances. This is not the case for higher order needs. Maslow (1943, 1954) and Alderfer (1971, 1972) discuss in detail the nature of higher order needs and their motivational implications.
5. Individuals who are capable of higher order need satisfaction will in fact experience such satisfaction when they learn that they have, as a result of their own efforts, accomplished something that they believe is meaningful or worthwhile.

On the basis of the above, Hackman and Lawler developed the following six measures: a) variety - the degree to which a job required employees to perform a wide range of operations in their work b) autonomy - the extent to which employees have a major say in scheduling their work c) task identity - the extent to which employees do an entire or whole piece of work and can clearly identify the result of their efforts d) feedback - the degree to which employees receive information as they are working, which reveals how well they are performing on the job e) dealing with others - the degree to which the job requires employees to deal with other people and f) friendship opportunities - the degree to which a job allows employees to talk with one another on the job and to establish informal relationships with other employees at work.

Heckman and Lawler collected data from some 200 telephone company employees to study why job design affects motivation. The research was designed to consider 1) the overall relationship between job characteristics and employee work attitudes and behavior and 2) whether the reaction of an employee to his work depends on the kinds of outcomes he values. Thirteen different jobs were studied and assessed on four core dimensions discussed above (a to d) and the strength of higher order needs of employees working on these jobs, was assessed. Higher order needs were established by asking employees how much, they would like to obtain certain kinds of personal outcomes from their work (for example, feelings of personal growth, feelings of accomplishment and so on). The average employee in the company was found to be fairly high in self-described desire for higher-order need satisfaction. An overall positive relationship, between the four core dimensions and employee work motivation, satisfaction, performance and attendance was confirmed as expected. Of special interest is the finding that when jobs were high on all four dimensions, employees reported having higher intrinsic motivation to perform well. It was also interesting to note that core-dimensions seemed to affect most strongly, the satisfaction of higher-order needs. Jobs designed according to scientific management principles, tend to be low on the four core-dimensions. Hence these jobs provide limited opportunity for employees to satisfy their higher-order needs and thus employees on these jobs are not motivated by their higher-order needs, to perform well. The study also found that rural workers have stronger higher-order needs than urban workers and thus they should respond more

positively to enriched jobs, since enriched jobs provide them with outcomes they value.

Brief and Aldag (1975) conducted a partial replication of Hackman and Lawler's (1971) conceptual model of the relationship between job characteristics and effective employee reactions. 104 employees, occupying jobs aimed at rehabilitating inmates, completed a questionnaire involving their (a) perceptions of job core-dimensions (b) internal work motivation (c) general job satisfaction (d) job involvement (e) higher-order need strength and (f) specific satisfactions measured by Job Description Index items. Significant positive correlations were found between job dimensions and employee reactions. While results point in the direction of Hackman and Lawler's findings, that higher-order need strength moderated the job characteristics - employee reaction relationship, the role of higher-order need strength was found to be more complex.

Dermer (1975) administered a questionnaire assessing extrinsic and intrinsic motivation to 81 department store managers in a large multi-state department store chain. In an expectancy theory framework, motivation for performance-contingent extrinsic rewards was measured by the perceived instrumentality of good budget performance to the attainment of 7 rewards (recognition, increased responsibility, advancement, better supervisory relations, better peer relations, increased pay and job security). Intrinsic motivation was measured by three statements about the degree to which good performance leads to higher order need satisfaction. The findings support the belief that intrinsic motivation is a necessary co-requisite for extrinsic motivation. The

higher a manager's intrinsic motivation, the greater his motivation for recognition, increased responsibility, advancement and increased pay.

RECENT EMPIRICAL STUDIES - NEED FULFILLMENT AND SATISFACTION

Two of the better known instruments used in the various studies are Porter's (1961) need satisfaction instrument and the satisfaction measuring Job Descriptive index of Smith, Kendall and Hulin, (1969).

Porter (1961) designed items using Maslow's needs as a measure of satisfaction. Empirical research, identifying a relationship between job satisfaction and level in the organizational hierarchy, has utilized the Porter need satisfaction questionnaire extensively. There is some data which suggests that pay and certain lower level needs are rated as more important by workers than by managers (Porter and Lawler, 1965). There is also some evidence that suggests that higher order needs are important to people at all organizational levels today, but that they are more important at the higher, than at the lower, levels of organization (Porter, 1962) and that the high level managers in large organizations have more need satisfaction than high level managers in small firms. The reverse is true for lower level managers (Porter, 1963b). Govindrajan (1972) did not find significant differences in need satisfaction in two levels of management - managers and assistant. Chernik and Philan (1974) found that the amount of need satisfaction was positively related to occupational level and negatively related to the hierarchical level of need satisfaction.

Ivancevich (1969) reported the results of a study of overseas

managers and compared his results with those of the international study of Haire, Ghiselli and Porter (1966). The autonomy and self-actualization needs appear to be the most critical areas of need discrepancy at all levels of management for both domestic and overseas executives.

Ivancevich found a relationship between the overseas manager's level in the organized hierarchy and the opportunity to satisfy only two specific need items. The top managers reported significantly more prestige and goal setting opportunities within the company than did the middle managers. In most need item scores, only relatively small differences were found between the two management levels. Blunt (1973) compared the managerial attitudes in South Africa with those of several other countries. South African managers were more dissatisfied in almost every need category, except in France and Italy where there was more dissatisfaction with social needs. In developing countries - Argentina, Chile and India, managers seemed to be more dissatisfied in all need categories except, the important category of self-actualization.

The above are some of the important studies carried out in this area in the private sector. In the public sector, similar studies are few. One study (Paine, Carroll and Leete, 1966) assessed the job satisfaction of civil service personnel. The results were compared to Porter's (1961) study from the private sector. The former indicated less satisfaction in all need items as compared to the latter.

Rhinehart, Barrell, Dewolfe, Griffin and Spaner (1969) carried out a study to determine how managers of the Department of Medicine and

Surgery of the Veterans Administration, compare with their counterparts in private sector. Both groups show positive relationships between levels of management hierarchy and need satisfaction (Porter's perceived deficiency in need fulfillment), with satisfaction decreasing as the management scale is descended. For both groups, two higher-order needs, autonomy and self-actualization, are less well satisfied at all levels of management in the public sector. There was also some indication that a college degree is a greater requisite for reaching the top in government than in business. Costello and Lee (1974) in a study of job satisfaction among professional employees in a publicly owned utility firm also found, that most of their lower level needs, were satisfied and that the greatest discrepancy was among higher-order needs. Herrick (1973) in a study of federal and state executives found that at the federal level, self-actualization needs were least satisfied and at the state level, security needs were most unfulfilled. Males and females perceived very little difference in the importance of their needs.

Although general agreement was found in terms of patterns of need satisfaction in both of the sectors, government managers were less satisfied than their counterparts in business. It is difficult to answer why it is so, as it is a complex problem, and many aspects of work climate must be taken into account. One possible explanation may be that governments are low in human relations area contrasted with Business and Industries growing people - centered orientation and it may be a contributing factor for the need satisfaction differences

between the two groups.

The other instrument of measuring satisfaction, Job Descriptive Index (Smith, Kendall and Hulin, 1969), has also been used by a number of researchers. Smith et al present the concept of JDI as a measure of satisfaction based on five areas of a job; the type of work, the pay, the opportunities for promotion, the supervision and the co-workers on the job. This was done in an attempt to understand the sources of satisfaction on the job and was considered to have important implications for mental health. Early hypotheses stated that satisfaction on the job was related directly to productivity - that the happy worker was the productive worker. However, no really substantial, reliable or general correlation between satisfaction and productivity has been established. (Brayfield and Crockett, 1955; Herzberg et al, 1957; Kahn, 1960; Opsahl and Dunnette, 1966; Smith and Cranny, 1968; Vroom, 1964).

Smith, Kendall and Hulin further noted that because they wanted to study the laws relating situations, personal characteristics, and policies to satisfactions and to behavior, the measures must be applicable to a wide variety of persons, on a variety of jobs and in a variety of situations. Job satisfaction was defined by them as the feelings a worker has about his job. It was hypothesized that these feelings are associated with a perceived difference between what is expected as a fair and reasonable return (or, when the valuation of future prospects is involved, what is aspired to) and what is experienced, in relation to the alternatives available in a given situation. Their relation to behavior depends upon the way in which the individual expects that form of behavior to help him achieve the goals he has accepted.

Herman and Hulin (1973) report results of a study of 174 supervisors in a manufacturing firm. The hypothesis, of different mean levels of satisfaction associated with different levels in the hierarchy, was supported using the JDI but was not supported using the Porter need deficiency scales. Brief and Aldag (1974) partially replicated the Hackman and Lawler (1971) conceptual model involving relationships between job characteristics and employee effective reactions. Questionnaires were completed involving (a) perceptions of job core dimensions (b) internal work motivation (c) general job satisfaction (d) job involvement (e) higher-order need strength and (f) specific satisfactions. The last item was measured using the Job Descriptive index items. Significant positive correlations were found between job dimensions and employee reactions. While the results of this study pointed in the direction of Hackman and Lawler's findings that higher-order need strength moderated the job characteristics - employee reaction relationship, the role of higher-order need strength was found to be more complex. It was found that individuals lower in high-order need strength, displayed stronger relationships between the core job dimensions and affective responses more extrinsic to the work itself (e.g. promotion) than do individuals high in higher-order need strength.

Gillet and Schwab (1975) carried out a study to compare standardized satisfaction measures - Job Descriptive Index (JDI) and the Minnesota Satisfaction Questionnaire (MSQ). In a comparative sense, it was observed that higher convergent and discriminant validities were obtained in their study than in a study by Erans (1969). The

four job satisfaction scales common to JDI and MSQ showed very high validities, when judged against the absolute criteria of Campbell and Fiske's (1959) procedure.

The above briefly summarizes the results of the review of the literature. As different approaches, to asking people about the importance of various needs to them, frequently produces quite different results, the comments about the relative importance of different needs must be tentatively stated (Portal et al 1975). In the next chapter we will elaborate on the hypothesis of the study and the instruments used in the research.

CHAPTER III
RESEARCH FOCUS AND METHODOLOGY

CHAPTER III

RESEARCH FOCUS AND METHODOLOGY

Man is complex and so is the interaction between him and the organization. He enters the organization with certain expectations and continually moderates his efforts based on his perception of performance, outcomes and rewards, etc. His continuing membership will be based on the successful interaction with the organization. The interaction determines (a) whether or not the individual's skills and energies are adequate to meet organizational expectations and (b) whether or not the organizational resources are adequate to meet the individual's needs and goals. Depending on the results of this interaction, recommendations for policy or organizational changes can be made.

The focus of the research is on a study of managers in the private industry in Manitoba. The emphasis is on a manager's perceptions about certain characteristics of the job and the levels of need fulfillment, need discrepancy and need importance. A summary of the research setting is given elsewhere, (Table 1, Chapter I). Two sizes of firms were incorporated into the study (a) large size firms with 201 - 500 employees and (b) medium size firms with 51 - 100 employees. A standard industrial classification system was used to group industries of similar nature together to define eight categories for each industry size. The number of respondents was 159 in the large size firms and 224 in the medium size firms (Table 2, Chapter I). Within each organization, two levels of hierarchy were included in the study - the senior level and the intermediate level. Four key areas of management -

General Management, Marketing and Sales, Finance and Accounting and Production were selected for the study. The distribution of respondents, based on levels and areas of management for large firms, is given on Tables 3, 4 and 5. Similar information for medium size firms is included in Tables 6, 7 and 8.

A questionnaire (see Appendix A) was used to obtain the data for the study. It consisted of four parts and it will be described later on in this chapter.

VARIABLES OF THE STUDY

The following independent variables were selected for the main body of the research:

- (a) Level of Management - In each size of firm, two levels of management hierarchy were studied (i) Senior Managers and (ii) Intermediate Managers. These were included to analyze the differences in managerial behaviors because of manager's level of hierarchy in the organization.
- (b) Size of the Firm - Two sizes of firms were studied in the analysis (i) Large size firms employing 201 to 500 employees and (ii) Medium size firms with 51 to 100 employees. These two sizes were included to examine if there is any significant difference between managerial behavior in relation to the size of firm.
- (c) Early Life - Rural/Urban background. The background of the early life of the managers (i.e. where did they spend most of their early life up to 12 years) was used as an index. Those who came from farm background were classified as rural whereas those who

came from towns and cities were classified as urban.

- (d) Age - The average age of the sample population was selected as the approximate cut-off point. Managers whose age was less than 50 years, were classified as young whereas, the rest were classified as old.
- (e) Level of Education - This variable was included to examine whether there is any significant differences in a manager's perception, behavior and attitudes because of his educational background.

The above independent variables were used to formulate major propositions for research as given below.

PROPOSITIONS

Level of Management:

1. Senior level managers will have a higher degree of need fulfillment as compared to the intermediate level managers. (i.e. the higher the level of management, the greater the degree of need satisfaction).

Size of Firm:

2. Managers of large size firms will have a higher degree of need fulfillment as compared to the managers of medium size firms. (i.e. the larger the size of the firm, the greater the degree of need satisfaction).

Rural and Urban Background:

3. Managers with a rural background will have a higher need discrepancy for all need categories as compared to the managers who were socialized in urban areas.

High-order Need Strength:

4. Senior level managers will have significantly more desired high-order need strength, as compared to intermediate level managers. (i.e. the higher the level of management, the more the desired high-order need strength).

Job Core Dimensions:

5. A manager's perception of his job's core dimensions (i.e. variety, autonomy, task identify and feedback) will be positively correlated to measures of satisfaction and job design.
- 5a. A manager's perception of his job's four core dimensions (i.e. variety and challenge, autonomy, task identity and feedback) will be positively correlated to specific satisfaction items.

for those with high higher-order need strength, and it will be higher than the relationships for managers with low higher-order need strength.

JDI and Level of Management:

6. The level of satisfaction (JDI) will be positively correlated with a manager's level of hierarchy in the organization. (i.e. the higher the level of management, the greater the degree of satisfaction).

Occupational Stress:

7. Intermediate level managers will have higher levels of stress as compared to the senior level managers, irrespective of the size of the firm.

...

Data was collected and the above propositions tested by analyzing the manager's perception about the following dependent variable. These are described in greater detail in the next section.

- (a) Levels of need fulfillment, need discrepancy and need importance.
- (b) Job satisfaction and job design
- (c) Core-Dimensions
- (d) Job Descriptive Index
- (e) Higher-order Need Strength
- (f) Occupational stress

The differences in manager perceptions were tested for statistical significance at the 5 percent level using the Mann - Whitney U-Test or the two-tailed t-test.

DESCRIPTION OF THE QUESTIONNAIRE

The questionnaire used in the study is given in Appendix A. It consists of four parts. The first part deals with assembling personal demographic data from the respondent such as sex, age, levels of education and income, fringe benefits, levels of his position within the

organizational hierarchy and years of service, both total and in his or her present job. Data was also collected to establish each respondent's regional affiliation, specialization and professional association.

In the second part, the respondents were asked questions related to the Job Descriptive Index, (Smith, Kendall and Hulin, 1969). The JDI measures satisfactions within five areas of a job; the type of work, the pay, the opportunities for promotion, the supervision and the co-workers on the job. Five scales, as applied previously by other researchers, were incorporated to study these areas. For each area a list of adjectives or short phrases is given. The instructions for each scale would ask the respondents to put Y (for Yes) beside an item if the item described the particular aspect of their job (work, pay, etc.), N (for No) if the item did not describe that aspect and to enter a question mark (?) if they could not decide. This format has been adopted to minimize response sets, which are more likely to arise if response alternatives are printed in a fixed order on the sheet.

A summary description of these items is given below:

Work (Item 7 to 24)

Positive Items - 8, 10, 12, 13, 14, 16, 17, 19, 20 and 24
Negative Items - 7, 9, 11, 15, 18, 21, 22 and 23

Supervision (Items 25 to 42)

Positive Items - 25, 28, 29, 30, 31, 34, 37, 39, 40 and 42
Negative Items - 26, 27, 32, 33, 35, 36, 38 and 41

Pay (Items 43 to 51)

Positive Items - 43, 44, 47 and 50
Negative Items - 45, 56, 48, 49 and 51

Promotions (Items 52 to 60)

Positive Items - 52,54,56,59 and 60

Negative Items - 53,55, 57 and 58

Co-Workers (Items 61 to 78)

Positive Items - 61, 64, 66,67,68,71,75 and 71

Negative Items - 62,63,65,69,70,72,73,74,76 and 78

For each item, the responses were scored according to the weights given below (Smith, Kendall and Hulin, 1969; Gillet and Schwab, 1975):

<u>Responses</u>	<u>Weight</u>
Yes to a positive item	3
No to a negative item	3
? to any item	1
Yes to a negative item	0
No to a positive item	0

In this way it was possible to establish the mean score and the standard deviation of each of the five items for any independent variable of the study for statistical analysis. (Smith, Kendall and Hulin, 1969).

In the third part, twenty questions were selected to study certain variables concerned with managerial motivation. How much of a need gratification does the manager feel he is actually receiving from his job? How satisfied is the manager with the degree of need fulfillment? Is it up to his expectations or, does it fall short of what he thinks the job should supply in the way of need fulfillment? How important are these needs to him? Maslow's need classification system - with a couple of modifications was used. The five needs investigated are security, social, esteem, autonomy and self-actualization (in their

order of theoretical priority). The questions were arranged randomly in the questionnaire rather than in a theoretical order. Questions of this nature have been used by other researchers. (Porter, 1964; Haire Ghiselli and Porter, 1966; Evan, 1966; Miller, 1966; Porter and Mitchell, 1967; Porter and Lawler, 1968; Hackman and Lawler, 1971; Slocum, Topichak and Kuhn, 1971; Blunt, 1973; Tersine and Altimus, 1974).

For each of the 20 items, the respondents were asked their opinion about job attitudes or characteristics connected with their own position in their organization. For each characteristic they were asked to give three ratings:

- a) How much of the characteristic is there now? (Actual)
- b) How much of the characteristic do you think there should be? (Ideal)
- c) How important is this position characteristic to you?

Each rating is on a seven point scale, running from minimum to maximum. The respondents were asked to put a mark (x) above the number on the scale that represents the amount of characteristic being scored. Low numbers represent low or minimum amounts and high numbers represent high or maximum amounts. The responses to question (a) were used to measure need fulfillment, and need discrepancies were measured by using the responses to question (b) minus the responses to question (a) for these twenty items. Questions generally represent the goals for the satisfaction of need categories described earlier. Responses to question (c) were used to measure the importance of these needs. The scores for an individual respondent for each need category were obtained by averaging his responses to all the questions in that category.

In this way scores from each need category will be comparable directly to those from another category, despite the fact that different numbers of items have been used to measure the various categories. It should also be possible to establish the perceived instrumentality of the respondent's job according to his perceived importance.

The fourth part of the questionnaire was designed to study some specific areas. It consists of three sub-parts. Part IV (a) dealt with the study of occupational values of contemporary managers. Based on the previous work of Kilpatrick (1964), Minor (1971) and Ondrack (1971, 1973) nine occupational values were selected for study. They generally cover Maslow's five basic needs and in rank order are as follows:

1. Challenge in Work
2. Good Salary
3. Opportunity for Achievement
4. Independence
5. Status
6. Opportunity for Personal Growth
7. Good Supervision
8. Good Relations with Subordinates
9. Security

These items in the proposed study were arranged alphabetically in Part IV (a) of the questionnaire and respondents were asked to rank them in order of their preference. As we could not find sufficient data to establish a proposition for contemporary managerial preference for occupational values except that self-actualization values should be rated higher, we have limited our analysis to a comparison among the size of the firm and the levels within a firm.

Part IV(b) was designed to study the organizational stress associated with job related items (Kahn, Wolfe, Quinn and Snoek, 1964). The fourteen (14) questions chosen, are the same as those used by Kahn et al in their national survey. The respondents were asked to choose

one of the five fixed alternate responses: Never, Rarely, Sometimes, Rather Often or Nearly All the Time. These alternatives were assigned coding values of from 1 to 5 respectively. The respondents overall stress score was his total score derived from all fourteen items. This score was subsequently converted to a one-digit code for computation of percentages and for making comparisons.

Part IV (c) of the Questionnaire was designed to deal with questions of general health (Dunn and Cobb, 1962; Tannenbaum, Kavcic, Rosner, Vianello and Wiesner, 1974) and was included to investigate the relationship between the hierarchical status and a manager's health. In a limited search of the literature, insufficient data was found to formulate a decisive proposition for the general health of managers. Hence, the proposition adopted was based on the widely held notion that senior executive will have an unusual prevalence of ulcers.

INSTRUMENTS AND MEASURES

The following instruments and measures were developed to assist in the analysis of the data.

1. Job Descriptive Index - The JDI scores for type of work, supervision, pay, promotion and co-workers were computed as measures of job satisfaction. For these measures the format, item development, internal consistency, order effects, response-sets effects, scale intercorrelations, scoring and score statistics have all been examined in detail by Smith, Kendall and Hulin (1969). These measures are considered very acceptable and have been used by other researchers also.

2. Maslow's Need Hierarchy - Mean scores were computed for the need categories of security, social, esteem, autonomy and self-actualization. For each of the five headings, the specific questionnaire items used to measure these needs are listed below:

- (a) Security
The feeling of security in my job.
- (b) Social
The opportunity to develop close friendship in my job.
- (c) Esteem
The feeling of self-esteem or self-respect.
The prestige of a job inside the company.
- (d) Autonomy
The opportunity for independent thought and action.
The freedom to do things.
The opportunity for participation.
- (e) Self-Actualization
The opportunity for personal growth.
The feeling of worthwhile accomplishment.
The opportunity to do challenging work.
The amount of variety in my job.

3. Specific Satisfaction Item - A measure for average need satisfaction was developed on the lines of the previous work by Hackman and Lawler (1971). It was computed as an average score from the responses to the following 12 items:

- Personal growth and development
- Self-esteem obtained from the job
- Opportunity for independent thought
- Prestige inside the company
- Amount of close supervision received
- Security
- Pay
- Development of close friendships
- Promotion
- Respect and Fair treatment from the boss
- Feeling of worthwhile accomplishment
- Participation in job-related items

4. Need Discrepany Scores - were obtained by averaging the

scores of response (b), minus response (a), for all need categories and need satisfaction items.

5. High-Order Need Strength - The higher order need satisfaction was measured by averaging the scores of those items of Part III in the questionnaire which related to autonomy and self-actualization categories. These items were:

- Opportunity for personal growth
- Opportunity for independent thought
- Opportunity to find how I am doing
- Opportunity to complete the work I start
- Opportunity to do challenging work
- Feeling of performing the job well or poorly
- Opportunity to do a number of things
- Opportunity to do the whole job
- Freedom to do pretty much what I want
- Variety in the job
- Feeling of worthwhile accomplishment
- Participation in job-related decisions

6. Job Design - An average score for job design was computed, by averaging the responses to the following specific items, which are related to job characteristics.

- Opportunity to do complete job.
- Amount of close supervision received
- Opportunity to do challenging work
- Pay
- Opportunity to do a number of things
- Opportunity to do the whole job
- Promotion
- Respect and fair treatment from the boss.

7. Measures of Core Dimensions - These measures were used to study job characteristics with emphasis on motivation. The measures adopted are modifications of those used by Turner and Lawrence (1965) and are similar to those used by Hackman and Lawler, (1971) and Brief and Aldag (1975). In all, five instruments were developed in this study - four as measures of core dimensions - variety and challenge,

autonomy, Task Identity and Feedback, and one as a measure of interpersonal dimension - friendship opportunities. These dimensions are given below. Under each of the five headings, the specific questionnaire items used to measure these needs are also listed. These specific items total eleven (11) and are arranged randomly in Part III of the questionnaire. The core dimensions and the specific questions are as follows:

- (a) Variety and Challenge
Opportunity to do challenging work
Opportunity to do a number of different things
Variety
- (b) Autonomy
The opportunity for independent thought and action
Freedom to do pretty much what I want from my job
Participation in job-related decisions
- (c) Task Identity
Opportunity to complete the work I start
Opportunity to do the whole job
- (d) Feedback
The opportunity to find how I am doing
The feeling that I am performing the job well or poorly
- (e) Friendship Opportunities
Development of close friendships

8. Occupational Stress - An average tension/stress score was computed by averaging the responses to 14 questions in Part IV(b). A respondents overall average stress score was used for computation of percentages and for comparison.

LIMITATIONS OF THE STUDY

This is the first extensive study of its kind for the Province of Manitoba. Hopefully, the results of the study will be useful for future planning. Although, for want of time and lack of funds, it

was not possible to incorporate the managerial group in the public sector, yet it is hoped that the results will show industry trends, and will signal the start of similar studies in the government bureaucracies.

Some of the limitations of the study must be pointed out. The research was carried out in the Province of Manitoba and covers the typical industrial character of the Province. There were very few industries which incorporate a high degree of innovation (Electronics Oriented) and/or sophisticated industrial production (Steel Mills, etc.) Consequently, generalization of the results of the study to other areas may be questionable. It could perhaps be said that for similar settings the results of the study can be generalized. In that context, the results and findings could apply to the other major cities in the Prairie Provinces.

This completes the description of the research focus, methodology and the limitations of the study. The results of the analysis are presented in subsequent chapters. The next chapter deals mainly with the analysis of personal demographic data and presents a profile of a typical Manitoba manager.

TABLE 3

LARGE SIZE FIRMS
NATURE OF INDUSTRY WITH LEVELS OF MANAGEMENT
DISTRIBUTION OF RESPONDENTS

<u>Nature of Industry</u>	<u>Levels of Management</u>	
	<u>Senior</u>	<u>Intermediate</u>
Agricultural Implements, Heavy Machines and Equipment	15	21
Clothing and Textiles	9	11
Construction Materials	12	7
Electronics, Scientific & Professional Equipment	7	12
Food and Beverages	16	23
Furniture	2	2
Lumber, Pulp and Paper	<u>9</u>	<u>13</u>
TOTALS	<u>70</u>	<u>89</u>
	GRAND TOTAL	159

TABLE 4
LARGE SIZE FIRMS
NATURE OF INDUSTRY WITH AREAS OF MANAGEMENT
DISTRIBUTION OF RESPONDENTS

<u>Nature of Industry</u>	<u>General Mgmt.</u>	<u>Marketing & Sales</u>	<u>Finan. & Acct.</u>	<u>Prod.</u>	<u>Totals</u>
Agricultural Implements, Heavy Machines and Equipment	8	7	8	13	36
Clothing and Textiles	6	5	6	3	20
Construction Materials	4	6	3	6	19
Electronics, Scientific and Professional Equipment	5	4	5	5	19
Food and Beverages	10	12	8	9	39
Furniture	2	1	-	1	4
Lumber, Pulp and Paper	6	4	5	7	22
	—	—	—	—	—
TOTALS	41	39	35	44	159
	—	—	—	—	—

TABLE 5

LARGE SIZE FIRMS
AREAS OF MANAGEMENT VERSUS LEVELS OF MANAGEMENT
DISTRIBUTION OF RESPONDENTS

<u>Area</u>	<u>Senior</u>	<u>Intermediate</u>	<u>Totals</u>
General Management	37	4	41
Marketing and Sales	5	34	39
Finance and Accounting	11	24	35
Production	<u>17</u>	<u>27</u>	<u>44</u>
TOTALS	<u>70</u>	<u>89</u>	<u>159</u>

TABLE 6

MEDIUM SIZE FIRMS
NATURE OF INDUSTRY WITH LEVELS OF MANAGEMENT
DISTRIBUTION OF RESPONDENTS

<u>Nature of Industry</u>	<u>Levels of Management</u>	
	<u>Senior</u>	<u>Intermediate</u>
Agricultural Implements, Heavy Machines and Equipment	28	28
Clothing and Textiles	17	15
Construction Materials	6	7
Electronics, Scientific & Professional Equipment	18	10
Food and Beverages	10	16
Furniture	16	13
Lumber, Pulp and Paper	7	6
Printing	<u>13</u>	<u>14</u>
TOTALS	115	109
	<hr/>	<hr/>
	GRAND TOTAL	224

TABLE 7

MEDIUM SIZE FIRMS
NATURE OF INDUSTRY WITH AREAS OF MANAGEMENT
DISTRIBUTION OF RESPONDENTS

<u>Nature of Industry</u>	<u>General Mgmt.</u>	<u>Marketing & Sales</u>	<u>Finan. & Acctg.</u>	<u>Prod.</u>	<u>Totals</u>
Agricultural Implements, Heavy Machines and Equipment	26	9	10	11	56
Clothing and Textiles	15	5	4	8	32
Construction Materials	1	5	-	7	13
Electronics, Scientific and Professional Equipment	8	6	5	9	28
Food and Beverages	9	3	3	11	26
Furniture	10	5	7	7	29
Lumber, Pulp and Paper	6	-	2	5	13
Printing	<u>7</u>	<u>5</u>	<u>7</u>	<u>8</u>	<u>27</u>
TOTALS	<u>82</u>	<u>38</u>	<u>38</u>	<u>66</u>	<u>224</u>

TABLE 8

MEDIUM SIZE FIRMS
AREAS OF MANAGEMENT VERSUS LEVELS OF MANAGEMENT
DISTRIBUTION OF RESPONDENTS

<u>Area</u>	<u>Senior</u>	<u>Intermediate</u>	<u>Totals</u>
General Management	70	12	82
Marketing and Sales	7	31	38
Finance and Accounting	11	27	38
Production	<u>27</u>	<u>39</u>	<u>66</u>
TOTALS	<u>115</u>	<u>109</u>	<u>224</u>

CHAPTER IV
GENERAL PROFILE OF A MANITOBA MANAGER

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In a special report 'Young Top Management, the new goals, rewards life styles' Business Week (1975), the typical profile of a young dedicated top executive in North America has been summarized.

Never in this century have so many young executives climbed so high so fast. Still under 40, these executives are making it big by running some of the country's major corporations. This is a new breed of organization man: the institutionalized entrepreneur. There is a price to be paid, and the young executive seems willing to pay it. As Luther H. Hodge Jr., the 39-year old chairman of the North Carolina National Bank says (Business Week, 1975) "I have less religion, less family, less quality of life, less of a lot of things because I am willing to make a commitment to participate in running a company". These managers are flexible in their management style, worried about breadth of knowledge, wedded to their work and intent on making a lot of money. They are young, and because youth is impulsive, everything is challenged.

In this chapter, we present a general profile of a Manitoba manager. This profile is based on the results of the data received from 116 managers. In the survey, questionnaires were sent to 383 managers and the response rate for managers from large size firms was 38.4% (61 out of 159) and for managers from small size firms was 24.6% (55 out of 224).

In developing a typical profile of a Manitoba manager, we have examined such things as to how much education they have? What are their

experience levels, areas of specialization in relation to work, income and fringe benefits? Whether their fathers' background was farming or whether he was an employee or self-employed? Whether these managers were Canadians by birth or came from abroad? What are their main hobbies and what journals do they read and what languages do they speak at home? In developing the profile, we also checked to see if there were any other visible trends or specific patterns.

In addition to the above general analysis, the data was analyzed in detail in terms of the variables of the study - level of management, size of the firms, rural/urban background, age and level of education.

GENERAL PROFILE

The world of industrial managers in the Province, is the world of men. There were only two female managers out of a total of 116 respondents. Four respondents declined to identify their sex. Incidentally, both of the female managers are in the finance and accounting area - one with a large size firm at a senior level and one with a medium size firm at an intermediate level.

The typical manager is married (96.5%) and averages 47 years of age. About 79% of the managers come from urban background with 21% from rural background. In terms of parental occupational background, 28.8% of the grandfathers were farmers and 35.6% were employees whereas only 14% of the fathers were farmers and 48.2% were employees. This indicates a declining trend towards farming and an increase in the employee class. This finding is consistent with the general shift away from farming in industrial countries.

A majority of managers were born within the country and have been residing here since birth. However, a significant proportion of managers (15.3%) were born in other countries but have been living here for more than 20 years. The language spoken predominantly at home in interpersonal communication is English (94.5%). Approximately 67.3% of the managers are Protestants, 19.2% are Catholics and 8.7% are Jewish.

The picture in terms of highest level of formal education is not very good. Approximately 18.6% did not complete high school. The percentage of managers who completed their high school, the percentage who had some college and the percentage who are college graduates are each 26.5%. Only 1.8% have had a post-graduate degree. By and large, the Manitoba managers are much better educated than their parents and are generally better educated than their spouse.

The average annual income of the typical manager is \$25,420. In terms of fringe benefits, 63.8% reported receiving a bonus of some sort, 25.3% get reimbursement of special kinds of expenses and 52.6% have company vehicles. A majority of managers, 42.7%, were selected from inside (the whole organization) to their present position, 31.8%, were promoted from within the same department. It is interesting to note that a significant proportion (25.5%) were selected from outside.

A majority of managers (66.4%) have business administration as their major area of specialization in relation to work, followed by 27.0% in accounting and 24.1% in engineering.

Managers were asked about their reading preferences for journals of technical, professional or general interest. Financial Post was rated as the journal of first choice by 54.9% of managers whereas, Canadian

Business was ranked second (38.6%). In magazines of general interest, most managers (55.6%) indicated reading Time as first choice. Newsweek and Reader's Digest were selected as second choice magazines by 22.9 and 18.6% of the managers respectively.

In the area of main hobbies, responses were solicited for Fishing, Golf, Curling, Hockey, Water Skiing and others. Unfortunately, a great proportion (37.9%) indicated "others" as their main hobbies. They indicated such interests as hunting, boating, skiing etc. Apart from that, a significant proportion (20% or so) selected Golf, Fishing or Curling as one of their first three choices.

DETAILED PROFILE WITH EMPHASIS ON VARIABLES OF THE ANALYSIS

Age

The average age of the manager for the total sample is 47 years. The average age for managers in the large size firms is 48.44 and for the medium size firms is 45.75 years. The distribution of the managers, according to age in relation to the size of the firm and levels of management, is given in Table 9.

TABLE 9

AGES OF MANAGERS IN 1975

Age Group	Large Size		Medium Size		Total
	Senior	Intermediate	Senior	Intermediate	
20-29 years	0(0%)	3(10.0%)	0(0%)	3(11.1%)	6(5.3%)
30-39 years	8(25.8)	2(6.7)	6(23.1)	7(25.9)	23(20.2)
40-49 years	6(19.4)	11(36.7)	9(34.6)	8(29.6)	34(29.8)
50-59 years	14(45.2)	11(36.7)	10(38.5)	7(25.9)	42(36.8)
60 or more	3(9.7)	3(10.0)	1(3.8)	2(7.4)	9(7.9)
Total	31(50.8)	30(49.2)	26(49.1)	27(50.9)**	114*(100.0)
Mean Age in Years	48.44		45.75		47.19

* Two observations were missing from the small size firms

** Number in parenthesis is the percentage

It is interesting to note that in both sizes of firms, the numbers of respondents was just about 50-50 for each level of management.

Rural-Urban Background

Out of the total of 116 managers, 24(20.7%) came from a rural background. In the large size firms out of 61, 19.7% of the managers came from a rural background. In the medium size firms, this percentage was 21.8 out of a total of 55 managers. The percentage distribution of rural-urban background, according to the size of the firms and the levels of management, is given in Table 10.

TABLE 10
RURAL-URBAN BACKGROUND OF MANAGERS IN 1975

Background	Large Size Firms		Medium Size Firms		Total
	Senior N=31	Intermediate N= 30	Senior N=27	Intermediate N=28	
Rural	22.6%	16.7%	22.2%	21.4%	20.7%
Urban	77.4%	83.3%	77.8%	78.6%	79.3%
Total	100	100	100	100	100

At the Senior level of management, the distribution of managers from rural/urban background seems to be similar for both sizes of firms. At the intermediate level, medium size firms have more managers from rural background as compared to the number of managers at intermediate level in the large size firms.

Educational Background

(a) The educational background of the managers, according to the size of the firms and the levels of management, is given in Table 11(a).

TABLE 11(a)

EDUCATIONAL BACKGROUND OF MANAGERS

Educational Background	Large Size Firms		Medium Size Firms		Totals
	Senior N=31	Intermediate N=30	Senior N=27	Intermediate N=28	
Less than High School	8(26.7%)	4(13.3%)	6(23.1%)	3(11.1%)	21(18.6)**
High School	5(16.7)	9(30.0)	7(26.9)	9(33.3)	30(26.5)
Some College	8(26.7)	11(36.7)	4(15.4)	7(25.9)	30(26.5)
College Degree	7(23.3)	6(20.0)	9(34.6)	8(29.6)	30(26.5)
Post-Graduate Degree	2(6.7)	0(0.0)	0(0)	0(0)	2(1.8)
Total	30(50.0)	30(50.0)	26(49.1)	27(50.9)	113*(100.0)

* Three missing observations - one in large size and 2 in medium size firms

** Numbers in parenthesis are the percentages of the total

Only a small percentage of the managers have obtained post-graduate degrees (and that is only in the large size firms at senior level). Percentages of those who have completed high school or have some college for both sizes of firms, are greater for intermediate managers than those at Senior levels of management. The managers at intermediate levels of management, irrespective of the size of the firm, are generally better educated than those at senior levels of management.

(b) Professional non-university designations - This is one area in which the response rate in general was very poor and indicates that few managers have non-university professional certificates. A summary of the findings are given in Table 11(b).

TABLE 11(b)

NON UNIVERSITY PROFESSIONAL DESIGNATIONS

Designations	Large Size Firms		Medium Size Firms		Total
	Senior	Intermediate	Senior	Intermediate	
CA	1(6.7%)	0(0.0%)	0(0%)	0(0%)	1(2.3%)
RIA	1(6.7)	1(9.1)	2(22.2)	1(11.1)	5(11.4)
P. Eng.	4(26.7)	6(54.5)	2(22.2)	2(22.2)	14(31.8)
Others	9(60.0)	4(36.4)	5(55.6)	6(66.7)	24(54.5)
Total	15(57.7)	11(42.3)	9(50.0)	9(50.0)	44*(100.0)**

* Seventy-two observations were missing

** Number in parenthesis is the percentage.

The "others" class is comprised of other non-university designations i.e.: certificate or non-credit courses, etc. Although no clear cut trends are obvious, it can be inferred from the responses reported, that the Professional Engineer was rated highest, irrespective of the size of the firm and the levels of management.

Work Experience

The data on work experience is summarized and reported in Tables 12(a) to 12(c) for both the sizes of firms.

TABLE 12(a)

TOTAL WORK EXPERIENCE

Years	Large Size Firms		Medium Size Firms		Total
	Senior	Intermediate	Senior	Intermediate	
Less than 2 years	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)
2-5 years	0(0.0)	1(3.3)	0(0.0)	0(0.0)	1(1.9%)
6-10 years	1(3.2)	1(3.3)	1(3.8)	4(14.8)	7(6.1)
11-15 years	4(12.9)	2(6.7)	5(19.2)	4(14.8)	15(13.2)
16-20 years	5(16.1)	3(10.0)	0(0.0)	3(11.1)	11(9.6)
More than 20 years	21(67.7)	23(76.7)	20(76.9)	16(59.3)	80(70.2)
	31(50.8)	30(49.2)	26(49.1)	27(50.9)	114(100.0)

From Table 12(a) it can be seen that the typical manager in private industry has more than 20 years of total experience (70.2%) as indicated by the total sample. This trend, however, does exist for both the large size firms (67.7 to 76.7%) as well as for medium size firms (59.3 to 76.9%). The number of managers who have less than 5 years of total experience is not very significant.

Table 12(b) gives the duration of the first job experience of the respondents.

TABLE 12(b)

FIRST JOB EXPERIENCE

Years	Large Size Firms		Medium Size Firms		Total
	Senior	Intermediate	Senior	Intermediate	
Less than 2 years	4(12.9%)	10(33.3%)	13(50.0%)	7(25.9%)	34(29.8%)
2-5 years	8(25.8)	12(40.0)	4(15.4)	5(22.2)	30(26.3)
6-10 years	7(22.6)	4(13.3)	1(3.8)	7(25.9)	19(16.7)
11-15 years	2(6.5)	1(3.3)	3(11.5)	1(3.7)	7(6.1)
16-20 years	1(3.2)	2(6.7)	0(0.0)	1(3.7)	4(3.5)
More than 20 years	9(29.0)	1(3.3)	5(19.2)	5(18.5)	20(17.5)
	31(50.8)	30(49.2)	26(49.1)	27(50.9)	114(100.0)

A significant number of present day managers did not stay in their first job for more than 5 years. In fact, 29.8% left their job in less than 2 years and 26.3% left it between 2 and 5 years. Only 17.5% stayed in their first job for more than twenty years.

Few present day managers left the first job between the years of 11 and 15 (6.1%), and 16 and 20 (3.5%). The initial decision whether to stay or move to another job was thus made in the first five years by a significant proportion of the respondents. A few people left between 6-10 years (16.7%), but once they were with the company for that long they

did not tend to relocate in large numbers thereafter. These comments generally apply to the two sizes of firms, as well as to the managers at both levels of management.

An examination of Table 12(c) indicates that a very significant number of present day managers (42.1%) have been with their present company for more than 20 years. This trend exists for both sizes of firms and for both levels of management. This is consistent with our earlier observation that a significant number of managers are promoted from within the department or from within the organization.

TABLE 12(c)

PRESENT WORK EXPERIENCE

Years	Large Size Firms Senior	Intermediate	Medium Size Firms Senior	Intermediate	Total
Less Than 2 years	1(3.2%)	2(6.7%)	0(0.0%)	1(3.7%)	4(3.5%)
2-5 years	6(19.4)	6(20.0)	4(15.4)	4(14.8)	20(17.5)
6-10 years	3(9.7)	7(23.3)	5(19.2)	4(14.8)	19(16.7)
11-15 years	5(16.1)	1(3.3)	1(3.8)	6(22.2)	13(11.4)
16-20 years	4(12.9)	3(10.0)	1(3.8)	2(7.4)	10(8.8)
More than 20 Years	23(38.7)	11(36.7)	15(57.7)	10(37.0)	48(42.1)
	31(50.8)	30(49.2)	26(49.1)	27(50.9)	114(100.0)

General Health

In terms of general health, a significant proportion (73.6%) of the total respondents did not encounter pain in the stomach in the last thirty days. Of the 26.4% who reported pain, a very significant proportion reported relief in pain when they drank bicarbonate of soda.

A very large proportion reported an occasional occurrence of depression (64.2%), common cold (86.6%) and headache (64.5%). It must also be pointed out, that a significant number never encountered a feeling

of depression (33.9%), common cold (13.4%) and headache (27.3%).

A detailed analysis of mental and general health is given elsewhere in the dissertation. These brief comments are included just to cover a manager's typical profile.

The above describes in some detail, a number of important facets of a typical Manitoba manager working in the private sector. As compared to a top executive across the border, he is significantly older. His average age is 47 years, he is married and has over twenty years total experience. He is generally a Canadian by birth and comes from an urban background. In terms of a formal education, he has an equal chance of having completed (a) High School (b) some College and (c) College degree.

The average annual income of a Manitoba manager is \$25,420 (1975). A significant number of managers do receive a bonus and have a company vehicle.

A majority of managers read "Financial Post" and "Canadian Business". "Time", "Newsweek" and "Reader's Digest" are most popular in the general area of interest.

A large number of managers left their first job within the first five years, although a significant number have been with the present company for more than 20 years.

In terms of general health, the occasional occurrences of depression, common cold and headache appear quite common. However, a large proportion of managers are enjoying good health and do not appear to be suffering from peptic ulcers.

This completes the profile of a typical industrial manager in Manitoba. In the next chapter the analysis of the data based on Need Fulfillment and Need Discrepancy as perceived by these managers is presented.

CHAPTER V

NEED FULFILLMENT, NEED DISCREPANCY AND NEED IMPORTANCE

CHAPTER V

NEED FULFILLMENT, NEED DISCREPANCY AND NEED IMPORTANCE

Data for this chapter was obtained through the utilization of eleven items out of Part III of the questionnaire. As described earlier, the selected questions were based on a modification of Maslow's theory of need hierarchy (Porter, 1961). The need categories investigated are security, social, esteem, autonomy and self-actualization. For each question, respondents were asked to give three ratings.

- a. How much of the characteristic is there now? (Actual)
- b. How much of the characteristic do you think there should be? (Ideal)
- c. How important is this position characteristic to you?

Each rating was recorded on a seven point scale running from minimum to maximum. The responses to question (a) were used to measure the perceived level of fulfillment of the characteristics in question. The difference between (b) and (a) determined the amount of perceived discrepancy for each characteristic. Thus, the larger the difference between "should be" and "actual" the greater the dissatisfaction. The responses to (c) were taken as a singular indication of the relative importance associated with each characteristic.

The findings are presented on the basis of key propositions and on the independent variables of the study.

LEVELS OF MANAGEMENT

Generally speaking, executives at the highest levels of

organizations set broad policies whereas managers at intermediate and junior levels implement these policies and put them into action. Our sample of 116 respondents is evenly divided between 58 senior managers at the top and 58 managers at an intermediate level. There were no junior level managers in the sample.

Need Fulfillment

Proposition No. 1 Senior level managers will have a higher degree of need fulfillment as compared to the intermediate level managers. (i.e. the higher the level of management, the greater the degree of need satisfaction).

Table 13 shows the mean scores for the existing perceived need fulfillment for the entire population based on the manager's level of hierarchy in the organization.

TABLE 13
PERCEIVED NEED FULFILLMENT ACCORDING TO LEVELS OF MANAGEMENT

Need Clusters	Levels of Management		Z Value	Significance*
	Senior (N=58)	Intermediate (N=58)		
Security	5.517	5.517	-0.645	NS
Social	4.379	4.448	-0.157	NS
Esteem	5.741	5.198	-2.921	S
Autonomy	5.730	5.511	-1.670	S
Self-Actualization	5.237	5.392	-0.724	NS

* S = Significant at the 0.05 level; NS = Not significant at the 0.05 level

It can be seen from the table that the Mann-Whitney U-Test indicates a significant difference between the two levels of management for the need clusters of Esteem and Autonomy. The managers at the

senior level have a significantly higher degree of need fulfillment of esteem and autonomy as compared to managers at the intermediate level. The differences between the two levels of management for the need categories of security, social and self-actualization are not significant. These findings confirm the proposition at least for two need categories, and are generally in line with trends reported in the literature.

Need Discrepancy

The need discrepancy scores were obtained by subtracting the responses to part (a) from part (b) of the various items. These scores are considered to be more important for understanding managerial behavior because they are theoretically more likely to determine an individual's behavior. It is not how much of something we get that influences our behavior, as much as it is what we think we ought to get. The more the need discrepancy, the greater would be the general level of dissatisfaction of the manager pertaining to the need in question.

Table 14 shows the need discrepancy scores for two levels of management. For each need category it also shows the critical Z-value from the Mann-Whitney U-Test.

TABLE 14

LEVEL OF MANAGEMENT AND NEED DISCREPANCY

<u>Need Category</u>	<u>Senior</u>	<u>Intermediate</u>	<u>Z-Value</u>	<u>Significance*</u>
Security	0.310	0.466	-1.078	NS
Social	0.224	0.190	-1.390	NS
Esteem	0.190	0.362	-1.490	NS
Autonomy	0.253	0.178	-0.593	NS
Self-Actualization	0.539	0.409	-1.390	NS

* S = Significant at the 0.05 level; NS = Not significant
at the 0.05 level

The results of Table 14 indicate that the senior level managers have a higher need discrepancy in the categories of social, autonomy and self-actualization needs, whereas the intermediate level managers reported a somewhat higher need discrepancy in the areas of security and esteem needs. Although the differences in need discrepancy are not significant at the level tested and could have occurred just by chance, yet they show a trend in partial support of previous findings (Porter, 1962; Chernik and Philan, 1974; Rhinehart et al, 1969) regarding the higher order needs.

However, it is significant that Manitoba managers reported a comparatively high need discrepancy for the category of security, with intermediate managers reporting somewhat higher scores as compared to senior managers. Table 15(a) and 15(b) list the need discrepancy scores in an increasing order, as reported by Manitoba managers at senior and intermediate levels of management respectively. For comparison purposes, we have also included similar scores reported in a comparison of American managers working in the United States as well as those working overseas (Ivancevich, 1969). However, caution must be exercised in the interpretation of Tables 15(a) and 15(b).

TABLE 15(a)

SENIOR LEVEL MANAGER RANKING OF NEED DISCREPANCY

<u>Need Category</u>	<u>Manitoba</u>	<u>United States</u>	<u>Overseas</u>
Esteem	0.19	0.42	0.25
Social	0.22	0.27	0.34
Autonomy	0.25	0.58	0.51
Security	0.31	0.36	0.43
Self-Actualization	0.54	0.83	0.78

The senior level managers in each study reported the highest need discrepancy in the area of self-actualization. Surprisingly, dissatisfaction with security needs was rated quite high in the study of overseas managers and it ranked similarly to the Manitoba managers. However, for managers in United States the ranking for security was somewhat lower. The need discrepancy for autonomy was rated by the senior Manitoba manager higher than esteem and social need discrepancies, but lower than security.

TABLE 15(b)

INTERMEDIATE LEVEL MANAGER - RANKING OF NEED DISCREPANCY

<u>Need Category</u>	<u>Manitoba</u>	<u>United States</u>	<u>Overseas</u>
Autonomy	0.18	0.84	0.80
Social	0.19	0.34	0.46
Esteem	0.36	0.32	0.44
Self-Actualization	0.41	1.01	0.93
Security	0.47	0.28	0.65

In the case of the intermediate managers, Table 15(b) shows that although self-actualization need discrepancy was rated quite high by the Manitoba manager, the need discrepancy in autonomy was rated lowest. These managers in terms of autonomy and need fulfillment, reported lower scores than senior managers (Table 13) but apparently desired fewer opportunities for various items of autonomy.

Need Importance

Up to this point we have presented an analysis of need fulfillment for the industrial managers in Manitoba based on level of management. Also we have shown how much need discrepancy exists in terms of a manager's perception of how much they are getting from their

jobs and how much they should be getting. In this section, we present the results regarding their perceived importance of different needs.

Table 16 shows the scores for perceived need importance based on level of management, along with the values of Z-ratio from the Mann-Whitney U-Test.

TABLE 16

LEVEL OF MANAGEMENT - NEED IMPORTANCE

Need Category	Senior Level N=58	Intermediate Level N=58	Z-Value	Significance*
Security	5.259	5.724	-0.884	NS
Social	3.707	4.241	-1.426	NS
Esteem	5.448	5.440	-0.250	NS
Autonomy	5.966	5.839	-1.652	S
Self-Actualization	5.836	5.784	-0.834	NS

* S = Significant at 0.05 level; NS = Not significant at 0.05 level.

It is evident from Table 16 that the five types of needs are not seen as of equal importance by senior as well as intermediate managers. In terms of need importance self-actualization and autonomy needs are rated somewhat higher than the other needs by both levels of management. Social needs are ranked lowest by both the levels.

The senior level managers report somewhat higher scores for the need categories of esteem, autonomy and self-actualization as compared to the intermediate levels of management. The difference between the autonomy need importance is significant. These results are as would have been expected based on the conclusions of the previous two sections. It seems that there is a fairly strong, if by no means perfect, tendency for the perceived importance of needs and the perceived degree of need discrepancy to vary together (Haire, Ghiselli and Porter, 1966).

Table 17 lists the need importance cluster scores for the entire managerial population along with the mean cluster scores reported by Slocum, Topichak and Kuhn (1971) for United States and Mexico glass factory employees. The perceived need importance of Manitoba managers is arranged in an increasing order.

TABLE 17

MEAN NEED IMPORTANCE SCORES - MANITOBA, UNITED STATES AND MEXICO

<u>Rank Order</u>	<u>Need Category</u>	<u>Manitoba (N=116)</u>	<u>United States (N=83)</u>	<u>Mexico (N=94)</u>
1	Social	3.97	5.99	6.54
2	Esteem	5.44	5.66	6.82
3	Security	5.50	6.42	6.93
4	Self-actualization	5.81	6.14	6.83
5	Autonomy	5.90	5.62	6.79

The above results show some striking similarities between the results obtained in Manitoba and in the United States. In both cases, the social and esteem needs were ranked lower than the needs for security and self-actualization in terms of their importance. In the case of Mexico all the needs were considered fairly equal in importance. It must, however, be pointed out that the Manitoba study was on industrial managers, whereas the other studies were on factory operators and hence the generality of direct comparison is subject to question.

Based on our findings for levels of management, it can then be said that senior managers have significantly more need fulfillment, of esteem and autonomy categories. Intermediate managers in general have a higher need discrepancy and hence higher dissatisfaction. Irrespective of their level, Manitoba managers report comparatively high need discrepancy for the categories of self-actualization and security. Their high concern for security warrants some explanation.

These managers have a long length of service, are old, and have a relatively low education. Perhaps, because of the nature of the Prairie economy, their mobility is limited. By and large, these managers have reached a plateau in their career and are passing through a mid-life crisis (Smith, 1975). If they lose their job, they will find it difficult to obtain a suitable job replacement. No wonder security is of a paramount concern. As implied by Maslow (1965), perhaps these managers are somewhat fixated at the safety-need level, feel perpetually afraid, feel the possibility of catastrophe, for instance of unemployment, etc.

SIZE OF THE FIRM

Size is an organizational variable that has been studied rather extensively. A few studies have focused on a comparison of small-sized units within organizations, to large-sized units within these same or other organizations (Porter and Lawler, 1965). In making a comparison on the basis of organization size, categories representing size must always be drawn along arbitrary lines. We have called firms employing 201-500 employees as large and those with 51-100 employees as medium. This was established within the overall industrial context of the Province of Manitoba.

Need Fulfillment

Proposition No. 2. Managers of large size firms will have a higher degree of need fulfillment as compared to the managers of medium size firms (i.e. larger the size of the firm, the greater the degree of need satisfaction).

Table 18 shows the mean scores for the perceived need fulfillment for the entire population based on firm size. Also included are the Z-values from the Mann-Whitney U-Test.

TABLE 18

PERCEIVED NEED FULFILLMENT ACCORDING TO SIZE OF FIRM

Need Category	Size of Firm		Z-Value	Significance *
	Large N= 61	Medium N = 55		
Security	5.328	5.727	-1.381	NS
Social	4.279	4.564	-0.507	NS
Esteem	5.393	5.555	-0.053	NS
Autonomy	5.383	5.885	-0.892	NS
Self-Actualization	5.156	5.491	-.603	NS

*NS = Not Significant at 0.05 level

The results shown in Table 18 do not indicate any significant differences in favor of either a medium size firm or a large firm. For all need categories, however, the medium size firms seem to produce somewhat greater feelings of need fulfillment. These findings do not confirm the proposition as formulated. They are however, in line with some previous results (Haire, Ghiselli and Porter, 1966).

Need Discrepancy

Table 19 shows the need discrepancy scores for managers from large as well as medium size firms.

TABLE 19

SIZE OF FIRM AND NEED DISCREPANCY

Need Category	Size of Firm		t-ratio	Significance*
	Large N= 61	Medium N = 55		
Security	0.311	0.473	0.7170	NS
Social	-0.115	0.091	0.8463	NS
Esteem	0.254	0.300	0.2609	NS
Autonomy	0.301	0.121	1.3468	NS
Self-Actualization	0.422	0.532	0.7216	NS

*NS = Not significant at 0.05 level(two tailed t-test)

It can be seen from the results that the size of the firm did not make any significant difference in our study for need discrepancy of the managers. However a clear contrast, in the above results and those of need fulfillment presented in Table 18, exists. Whereas the fulfillment results showed a weak trend in favor of medium size firms, the need discrepancy results are somewhat lower for large size firms and suggest that generally managers in large size firms are more satisfied. Thus even though medium size firm managers reported slightly greater degrees of need fulfillment, their dissatisfaction is greater because perhaps, they have higher expectation levels than do large firm managers.

To analyze these trends further, data for each size of firm was separately broken down for each level of management. Table 20(a) and 20(b) show the results of need discrepancy for the two sizes of the firms.

TABLE 20(a)

LARGE SIZE FIRM - NEED DISCREPANCY ACCORDING TO LEVEL OF MANAGEMENT

Need Category	Senior N= 31	Intermediate N= 30	Z-Value	Significance*
Security	0.226	0.400	-0.532	NS
Social	-0.161	-0.067	-0.028	NS
Esteem	0.258	0.250	-1.309	NS
Autonomy	0.419	0.178	-0.756	NS
Self-Actualization	0.637	0.200	-2.422	S

*NS = Not significant at 0.05 level; S = Significant at 0.05 level

TABLE 20 (b)

MEDIUM SIZE FIRMS - NEED DISCREPANCY ACCORDING TO LEVEL OF MANAGEMENT

Need Category	Senior N = 27	Intermediate N= 28	Z-Value	Significance*
Security	0.407	0.536	-1.135	NS
Social	-0.296	0.464	-1.903	S
Esteem	0.111	0.482	-1.796	S
Autonomy	0.062	0.179	-1.095	NS
Self-Actualization	0.426	0.634	-0.478	NS

* S= Significant at 0.05 level; NS = Not significant at 0.05 level.

These tables indicate very interesting results. For large size firms, senior managers have significantly higher need discrepancy as compared to intermediate managers for self-actualization. For medium size firms, the intermediate managers have significantly higher need discrepancy as compared to senior managers in the categories of social and esteem. A simultaneous review of these tables indicates that the intermediate managers in the medium size firms are generally most dissatisfied. This stands to reason in view of the Prairie economy. In terms of security needs specifically, the large size firm provides a higher degree of satisfaction.

Need Importance

Table 21 shows the scores of perceived need importance based on the size of the firm.

TABLE 21

SIZE OF FIRM AND PERCEIVED NEED IMPORTANCE

Need Category	Size of Firm		t-ratio	Significance *
	Large N= 61	Medium N= 55		
Security	5.279	5.727	1.2208	NS
Social	3.869	4.091	0.6041	NS
Esteem	5.475	5.409	0.2143	NS

TABLE 21 (cont'd)

Need Category	Size of Firm		t-ratio	Significance*
	Large N= 61	Medium N = 55		
Autonomy	5.738	6.085	1.3622	NS
Self-Actualization	5.664	5.973	1.1498	NS

*NS = Not significant at 0.05 level (two tailed t-test)

These results indicate that the size of the firm does not make a significant difference on a manager's perceived need importance. The data however, does show a slight trend for managers from medium size firms to attach greater importance to each of the five need categories.

The results indicate only a partial support for the proposition as formulated. Large size firms do tend to provide higher satisfaction particularly for security needs. In terms of need discrepancy and hence level of satisfaction, the results indicate that intermediate managers in the medium size firms are most dissatisfied. In our study, the size of the firm did not make a significant effect on a manager's perceptions of need importance.

These findings are by and large in line with those of Haire, Ghiselli and Porter (1966). However, it must be pointed out that the size of the firms in their study, was different when compared to the size of Manitoba firms. A 'large' firm in their study employed more than 500 people and a firm with 1 - 500 employees was classified as 'small'.

RURAL- URBAN BACKGROUND

In the study, managers were asked to indicate where they had spent most of their early life (up to 12 years). Those who had

spent their early life on a farm were classified as having a rural background. The managers who had spent the early part of their life in towns and cities were labelled as having an urban background.

Need Fulfillment

Proposition 3. Managers with a rural background will have a higher degree of need fulfillment as compared to managers who have an urban background.

Table 22 shows the perceived need fulfillment scores based on rural/urban background.

TABLE 22

RURAL/URBAN BACKGROUND AND PERCEIVED NEED FULFILLMENT

<u>Need Category</u>	<u>Rural N = 24</u>	<u>Urban N= 92</u>	<u>t-ratio</u>	<u>Significance*</u>
Security	5.708	5.467	0.6199	NS
Social	4.000	4.522	1.1735	NS
Esteem	5.313	5.511	0.6123	NS
Autonomy	5.194	5.732	1.6546	NS
Self-Actualization	5.031	5.389	1.0543	NS

* NS = Not significant at 0.05 level (two tailed t-test)

The above results do not indicate any significant differences in perceived need fulfillment just because of a manager's early life. Except for security, however, managers from an urban background reported somewhat higher scores for the other need categories. The research findings do not confirm the proposition as formulated.

Need Discrepancy

Table 23 shows the need discrepancy scores for managers based on their rural/urban background.

TABLE 23

RURAL/URBAN BACKGROUND AND NEED DISCREPANCY

<u>Need Category</u>	<u>Rural (N=24)</u>	<u>Urban (N= 92)</u>	<u>Z-Value</u>	<u>Significance*</u>
Security	0.375	0.391	-0.498	NS
Social	-0.250	0.043	-1.394	NS
Esteem	0.167	0.304	-1.883	S
Autonomy	0.222	0.214	-0.047	NS
Self-Actualization	0.094	0.573	-2.304	S

* S = Significant at 0.05 level; NS = Not significant at 0.05 level.

The above results, by and large, shows that the managers from an urban background have a higher need discrepancy for various need categories as compared to the managers from a rural background. The difference is significant for esteem and self-actualization needs. These results indicate that rural managers are generally more satisfied with their jobs as compared to those from an urban background. The managers from an urban background, have a somewhat higher perceived need fulfillment and have higher expectations which are not being fulfilled at the work place.

Need Importance

Table 24 lists the perceived need importance scores based on a manager's early life.

TABLE 24

RURAL/URBAN BACKGROUND AND NEED IMPORTANCE

<u>Need Category</u>	<u>Rural (N = 24)</u>	<u>Urban (N=92)</u>	<u>t-ratio</u>	<u>Significance*</u>
Security	5.958	5.370	1.3011	NS
Social	3.417	4.120	1.5654	NS
Esteem	5.229	5.500	0.7109	NS
Autonomy	5.403	6.033	2.0255	S
Self-Actualization	5.167	5.978	2.5036	S

*S = Significant at 0.05 level (two tailed t-test)
NS = Not significant at 0.05 level

The above table indicates that urban managers, by and large, reported higher mean scores for various need categories as compared to managers from a rural background. Incidentally, these managers had also reported higher values for need discrepancy.

In the study, significant differences in perceived need fulfillment, based on a manager's early life were not found. However, the findings indicate, that rural managers are generally more satisfied than those from an urban background. The managers from an urban background have higher expectations which are not being met at the job. They also have a significantly higher perceived need importance for the need categories of autonomy and self-actualization. This would imply that managers from an urban background desire higher order need satisfaction more than the rural managers. This is at variance with previous studies, Hackman & Lawler (1971).

A meaningful comparison of these findings with those reported in the literature, could not be made. Some confusion exists as to the definition of worker background. Hulin and Blood (1967) indicated that people with rural backgrounds will report relatively greater job satisfaction than people with urban background. But in their study, they used plant location to determine worker background, inferring that an urban plant had urban workers and a rural plant had rural workers. The studies by Turner and Lawrence (1965) and Hackman and Lawler (1971) also used present locations of workers as their index variables. Shepard (1970) and Schuler (1973) found negative results when they used area where the worker had grown up (up to 20 years), as the index variable.

AGE

To obtain two groups approximately equal in number of managers, age 50 was selected as the dividing line. Those managers who were 49 years of age or younger, were termed the 'younger' group; and those 50 years and over the 'older' group.

Table 25 shows the perceived need discrepancy scores based on age.

TABLE 25
AGE AND PERCEIVED NEED DISCREPANCY

<u>Need Category</u>	<u>Younger(N=65)</u>	<u>Older (N=51)</u>	<u>t-ratio</u>	<u>Significance*</u>
Security	0.354	0.431	0.3421	NS
Social	0.046	-0.098	0.5888	NS
Esteem	0.300	0.245	0.3102	NS
Autonomy	0.195	0.242	0.3480	NS
Self-Actualization	0.565	0.358	1.3650	NS

* NS = Not significant at 0.05 level (two tailed t-test)

It is interesting to note that young managers reported higher need discrepancy in the categories of self-actualization, esteem and social, and lower need discrepancies in the categories of security and autonomy. However these differences are not significant.

LEVEL OF EDUCATION

In terms of levels of education, those managers who had some college or less, were classified as having 'low education' and the rest as having 'high education'. Table 26 shows the perceived need discrepancy scores based on levels of education.

TABLE 26

LEVEL OF EDUCATION AND PERCEIVED NEED DISCREPANCY

Need Category	Low Education (N= 84)	High Education (N = 32)	t-ratio	Significance*
Security	0.393	0.375	0.0710	NS
Social	-0.048	0.063	0.4046	NS
Esteem	0.220	0.422	1.0300	NS
Autonomy	0.250	0.125	0.8362	NS
Self-Actualization	0.384	0.711	1.9529	S

* NS = Not significant at 0.05 level (two tailed t-test)
 S = Significant at 0.05 level

The results of Table 26 indicate, that those managers with a higher education have in general, a higher degree of perceived need discrepancy and consequently would have a higher dissatisfaction with job. The difference is significant for the need category of self-actualization. This stands to reason, since because of their higher education, they have higher expectations.

AREA OF SPECIALIZATION

The perceived need discrepancy scores were examined based on a manager's area of specialization, to see if any particular field of specialization stands out in relation to the rest. In the study, four areas of specialization were included (a) General Management (b) Finance and Accounting (c) Marketing and Sales and (d) Production. Table 27 lists the perceived need discrepancy scores for all managers from each field.

TABLE 27

AREA OF SPECIALIZATION AND NEED DISCREPANCY

Need Category	General Mgmt. N = 31	Finance and Accounting N = 17	Marketing and Sales N = 31	Production N = 37
Security	.194	.824	.226	.486
Social	-.226	.647	-.097	-.097
Esteem	.129	.294	.194	.459
Autonomy	.097	.275	.258	.252
Self-Actualization	.339	.779	.468	.453

It can be seen from Table 27, that managers in the field of finance and accounting reported considerably higher need discrepancy than the rest of the managers, in the categories of security, social and self-actualization needs. In terms of various need discrepancies, the managers in the field of marketing and sales and production, by and large have similar responses. The managers in the field of general management reported least amounts of need discrepancy. These results are very suggestive, and imply maximum dissatisfaction for managers in the fields of finance and accounting. They have much higher expectations than what the job offers them, in terms of security, self-actualization and social needs.

Figure 2 graphically presents the perceived need discrepancy scores for the variables of the study discussed above. A summary of the findings in the areas of need fulfillment and need discrepancy is listed below:

1. Senior level managers have significantly more need fulfillment of esteem and autonomy. They are men at the top and are decision makers.
2. Manitoba managers, irrespective of their level of management, have a comparatively high need discrepancy in the areas of self-actualization and security. It could be that because of the nature of Manitoba

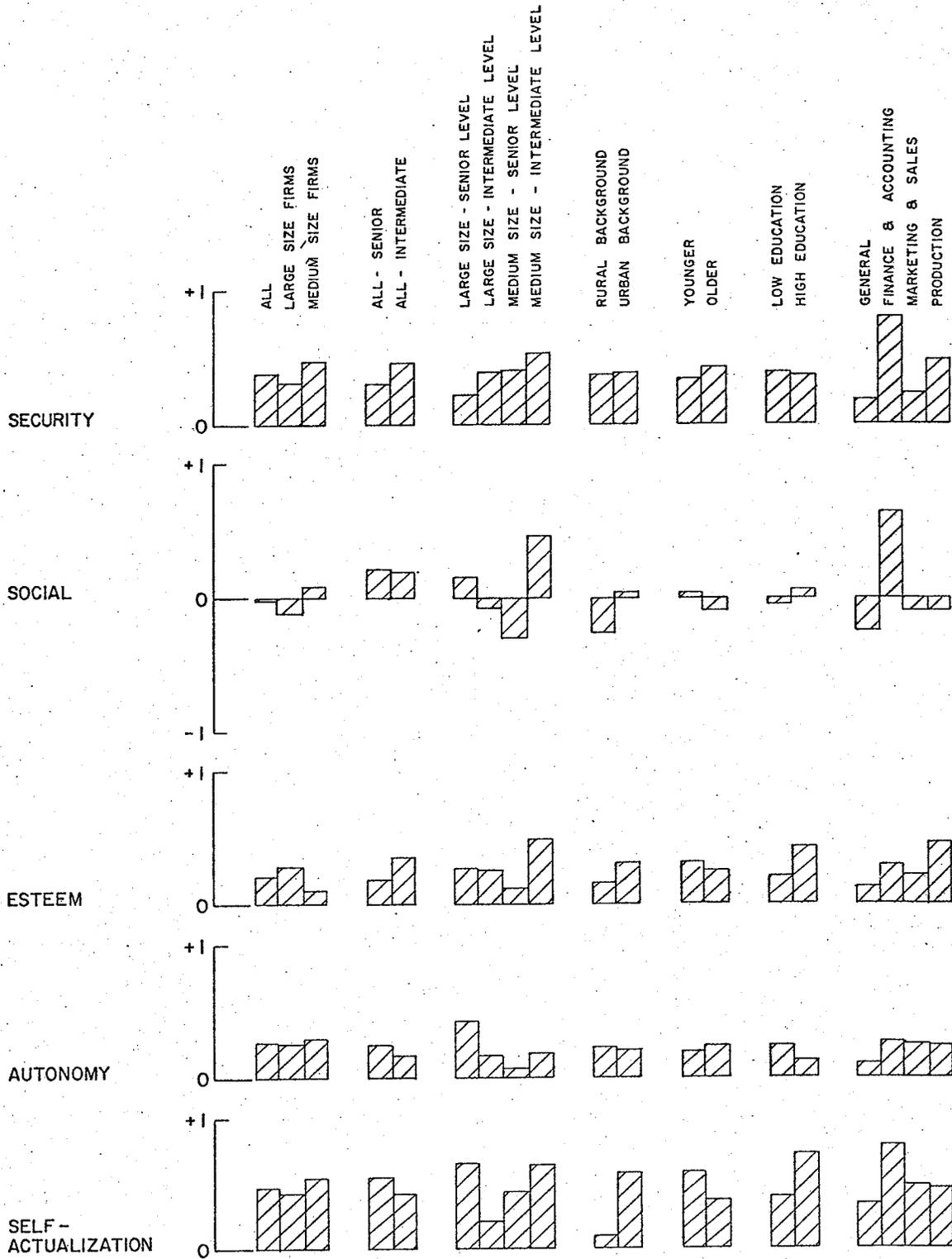


FIGURE 2. NEED DISCREPANCY VERSUS VARIABLES OF STUDY

industry there is very little room for innovativeness. The high concern for security is, perhaps, explainable, because these managers are by and large older, have low education, and possibly because of the Prairie economy, have limited mobility.

3. Because comparatively high need discrepancies simultaneously exists for lower and higher order needs, there is some question on the hierarchy of needs. The results throw some doubt on the validity of Maslow's theory of the hierarchy of the needs.
4. The size of the firm in our study did not make very significant differences for need fulfillment. Large size firms do tend to provide a higher satisfaction, particularly for security needs.
5. The results indicate that most of the dissatisfied managers are working at the intermediate level in the medium size firms.
6. Managers from a rural background appear generally to have a higher need fulfillment as compared to managers from an urban background.
7. Managers from an urban background have higher expectations and desire higher order need satisfaction, than the managers from a rural background.
8. Age does not make a significant difference in a manager's perception of need discrepancy.
9. Managers with a higher education are generally more dissatisfied based on higher order needs perhaps, because of their having higher expectations for these needs.
10. Managers in the finance and accounting fields have the highest level of perceived need discrepancy for most need categories. They seem to be loners and the most dissatisfied group.

This chapter basically dealt with the results of the analysis in the area of Need Fulfillment and Need Discrepancy as perceived by Manitoba managers. The next two chapters, summarize the results of the analysis associated largely with the job characteristics. Chapter VI deals primarily with core-dimensions whereas in Chapter VII the results based on Job Descriptive Index are presented.

CHAPTER VI

CORE DIMENSIONS, SPECIFIC SATISFACTION AND HIGHER

ORDER NEED STRENGTH

CHAPTER VI

CORE DIMENSIONS, SPECIFIC SATISFACTION AND HIGHER ORDER NEED STRENGTH

Core-dimension measures discussed in this chapter, were used to study the job characteristics, with emphasis on motivation. Measures adopted are similar to those used by others (Hackman and Lawler, 1971; Brief and Aldag, 1975). In all, five measures were developed in this study - four as measures of core-dimensions - Variety and Challenge, Autonomy, Task Identity and Feedback and one as a measure of interpersonal dimension - friendship opportunities. Under each of the five headings, specific questionnaire items were used to measure the total mean dimension as explained in Chapter III. The findings are presented under the headings of the independent variables of the study.

LEVEL OF MANAGEMENT

Table 28 shows the individual items used to measure the five dimensions and contains the responses of the entire population of managers based on their level of management. Also included are critical Z-values from the Mann-Whitney U-Test.

TABLE 28

LEVEL OF MANAGEMENT AND INDIVIDUAL ITEMS OF CORE DIMENSIONS				
ENTIRE POPULATION				
Individual Items	Levels of Management		Z-value	Significance*
	Senior (N=58)	Intermediate (N = 58)		
I. Variety and Challenge				
(a) opportunity to do challenging work	5.88	5.70	-0.182	NS

TABLE 28(cont'd)

Individual Items	Levels of Management		Z-Value	Significance*
	Senior (N=58)	Intermediate (N=58)		
(b) opportunity to do different things	5.75	5.54	-2.119	S
(c) Variety	6.00	5.84	-0.92	NS
II. Autonomy				
(a) opportunity for independent thought	6.20	5.86	-1.372	NS
(b) Freedom to do what I want	5.98	5.46	-1.325	NS
(c) Participation in decisions	5.94	5.51	-1.023	NS
III. Task Identity				
(a) opportunity to complete the work	6.24	5.81	-0.625	NS
(b) opportunity to do whole job	5.98	5.60	-1.207	NS
IV. Feedback				
(a) opportunity to find how doing	4.93	4.98	-0.093	NS
(b) Feeling performing job well	5.61	5.54	-0.274	NS
v. Friendship opportunities				
(a) development of friendship	4.70	4.53	-0.655	NS

* S = Significant at 0.05 level

NS = Not significant at 0.05 level

Table 28 shows no significant differences for the responses based on levels of management except for the opportunity to do challenging work, in which case, the senior managers reported significantly higher

mean-scores. This would be expected because of their being at the top level of the decision making process.

Table 29 shows the mean scores for the five dimensions for the entire population based on levels of management. Also included are the critical Z-ratio values from the Mann-Whitney U-Test.

TABLE 29
LEVEL OF MANAGEMENT AND CORE DIMENSIONS

Core Dimensions	Level of Management		Z-Value	Significance*
	Senior (N=58)	Intermediate (N=58)		
Variety and Challenge	5.569	5.598	-0.061	NS
Autonomy	5.730	5.511	-1.670	S
Task Identity	5.741	5.603	-1.088	NS
Feedback	5.043	5.172	-0.284	NS
Friendship Opportunity	4.379	4.448	-0.157	NS

* S = Significant at 0.05 level

NS = Not significant at 0.05 level

It can be seen from the table that the difference between the senior and intermediate level managers is not significant except for autonomy where the senior managers reported significantly higher mean scores as compared to the intermediate level managers. These same managers had reported a significantly higher level of perceived need fulfillment and generally a greater satisfaction with their jobs.

SIZE OF FIRM

Table 30 lists the mean scores for five dimensions for the entire population based on the size of the firm.

TABLE 30
SIZE OF FIRM AND CORE DIMENSIONS

Core Dimensions	Size of Firm		t-ratio	Significance*
	Large N= 61	Medium N = 55		
Variety and Challenge	5.361	5.830	1.6204	NS
Autonomy	5.383	5.885	1.9138	S
Task Identity	5.426	5.945	1.7874	S
Feedback	5.115	5.100	0.0486	NS
Friendship Opportunity	4.279	4.564	0.7874	NS

* NS = Not Significant at 0.05 level (two tailed t-test)

S = Significant at 0.05 level

These results indicate that managers in medium size firms have significantly higher scores for the dimension of autonomy and task identity. It is considered that because of the smaller size of the firm, these managers have a major say in scheduling their work and in selecting equipment and are able to more clearly identify the results of their efforts. The differences on other core dimensions are not significant.

To analyze the data further, the scores of the managers for large as well as medium size firms, were tabulated based on their level of management within each firm size. The results are tabulated in Tables 31 (a) and 31(b).

TABLE 31(a)

LARGE SIZE FIRMS - CORE DIMENSIONS ACCORDING TO LEVEL OF MANAGEMENT

Core Dimensions	Levels of Management		Z-Value	Significance*
	Senior (N=31)	Intermediate (N=30)		
Variety and challenge	5.290	5.433	-0.357	NS
Autonomy	5.430	5.333	-0.592	NS
Task Identity	5.452	5.400	-0.435	NS
Feedback	5.097	5.133	-0.387	NS
Friendship opportunity	3.935	4.633	-1.201	NS

- 97 -
 NS = Not significant at 0.05 level

Table 31(a) shows that in the large size firm, there is no significant difference in the perception of senior and intermediate managers based on the five dimensions.

TABLE 31(b)

MEDIUM SIZE FIRMS - CORE DIMENSIONS ACCORDING TO LEVEL OF MANAGEMENT

Core Dimensions	Levels of Management		Z-Value	Significance*
	Senior (N=27)	Intermediate (N=28)		
Variety and Challenge	5.889	5.774	-0.461	NS
Autonomy	6.074	5.702	-1.876	S
Task Identity	6.074	5.821	-1.177	NS
Feedback	4.981	5.214	-0.730	NS
Friendship Opportunity	4.889	4.250	-1.345	NS

* S = Significant at 0.05 level

NS = Not significant at 0.05 level

Table 31(b) indicates that senior managers in medium size firms consistently reported higher mean scores for the core dimensions except for "Feedback". In the case of "Autonomy" they reported significantly higher mean scores as compared to the intermediate managers.

Based on our results, it is considered that the smaller the size of firm, the easier it is to identify and define the results of manager's efforts. He has much more say in scheduling his work. Naturally, it is more so for a senior manager in small size firm.

RURAL-URBAN BACKGROUND

Table 32 shows the mean scores of the core dimensions based on a manager's early life. Also included are t-ratio values.

TABLE 32

RURAL/URBAN BACKGROUND AND CORE DIMENSIONS

Core Dimensions	Rural Background (N=24)	Urban Background (N=92)	t-ratio	Significance*
Variety and Challenge	5.153	5.696	1.5176	NS
Autonomy	5.194	5.732	1.6546	NS
Task Identity	5.458	5.728	0.7454	NS
Feedback	5.333	5.049	0.7735	NS
Friendship opportunity	2.246	1.854	1.1735	NS

* NS = Not significant at 0.05 level (two tailed t-test)

It can be seen from Table 5 that Urban managers reported somewhat higher scores for variety and challenge, autonomy and task identity and somewhat lower results for feedback and friendship opportunity as compared to the managers from rural background. However, the differences are not significant.

AGE

Table 33 lists the mean scores of core dimensions based on a manager's age i.e. younger (less than 50 years) or older (50 years or more.)

TABLE 33

AGE AND CORE DIMENSIONS

Core Dimensions	Younger (N=65)	Older (N=51)	t-ratio	Significance *
Variety and Challenge	5.656	5.490	0.5640	NS
Autonomy	5.677	5.549	0.4763	NS
Task Identity	5.777	5.539	0.8046	NS
Feedback	5.069	5.157	0.2914	NS
Friendship opportunities	4.414	4.353	0.2976	NS

* NS = Not significant at 0.05 level (two tailed t-test)

Although the younger managers in Table 33 show somewhat higher mean scores for various core dimensions as compared to older managers, the difference based on the t-ratio values are not significant at the 0.05 level. It can therefore be said that age does not significantly influence a manager's perception of these core dimensions.

LEVEL OF EDUCATION

Table 34 shows the mean scores for core dimensions based on a manager's education i.e. low education (some college or less) and high education (college degree or more)

TABLE 34

LEVEL OF EDUCATION AND CORE DIMENSIONS

Core Dimensions	Low Education (N= 84)	High Education (N=32)	t-ratio	Significance*
Variety and Challenge	5.512	5.771	0.7930	NS
Autonomy	5.452	6.062	2.0871	S
Task Identity	5.595	5.875	0.8530	NS
Feedback	5.119	5.078	0.1225	NS
Friendship opportunities	4.286	4.750	1.1519	NS

* NS = Not significant at 0.05 level (two tailed t-test)

S = Significant at 0.05 level

Managers with high levels of education, by and large, reported higher scores for core dimensions as compared to those with low levels of education. The difference is significant for the core dimensions of autonomy.

AREA OF SPECIALIZATION

The mean core dimensions based on a manager's area of specialization are summarized in Table 35.

TABLE 35

AREA OF SPECIALIZATION AND CORE DIMENSIONS

Core Dimensions	Area of Specialization			
	General Management N = 31	Finance & Accounting N = 17	Marketing & Sales N = 31	Production N=37
Variety and Challenge	5.183	5.667	5.946*	5.577
Autonomy	5.409	5.588	5.882*	5.595
Task Identity	5.371	6.000*	5.645	5.797
Feedback	4.839	4.971	5.161	5.351*
Friendship opportunities	4.323	3.824	5,097*	4.189

* highest mean score for that core dimension

It is interesting to note from Table 35 that Finance and Accounting managers reported highest scores on task identity dimension. This could be because of the nature of their work in which they have the responsibility for the complete job. Managers from Marketing and Sales reported highest scores for the core-dimensions of variety and challenge, autonomy and friendship opportunities. Again, this could have been expected because of the nature of their job. It has to be structured to provide them for variety and autonomy and offers them opportunities for fostering friendships. Managers in Production reported the highest mean score for Feedback. Apparently, this response is related to freedom in decision making in shops and the need for necessary feedback from the top for good performance.

So far, we have presented the results of our findings on core dimensions based on the various variables of the study. Figure 3 graphically shows the results in a condensed form and a summary of the findings in the area of core dimensions is presented near the end of this chapter.

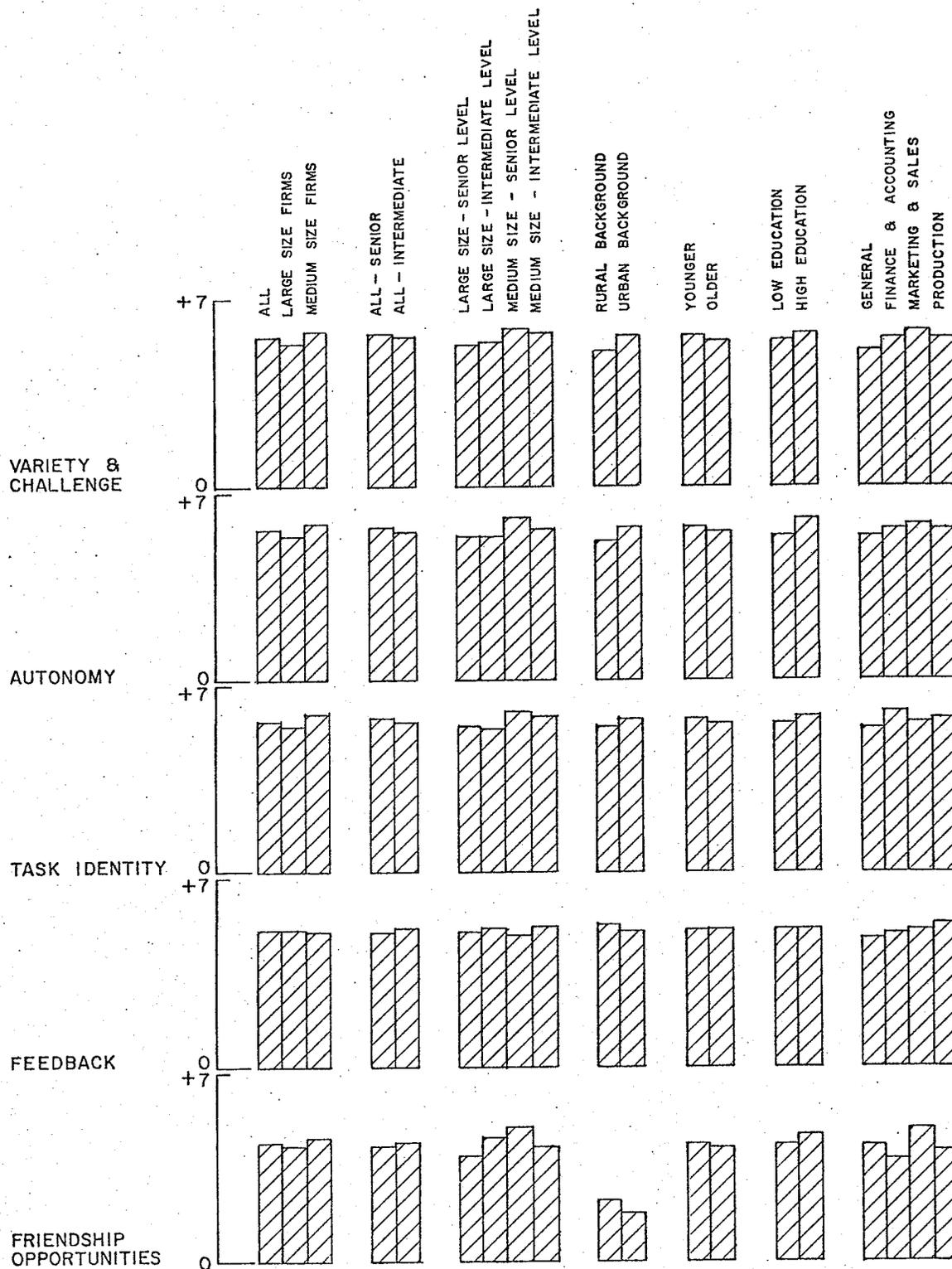


FIGURE 3. CORE DIMENSIONS VERSUS VARIABLES OF STUDY

SPECIFIC SATISFACTION ITEMS

Twelve items were selected to study the average managerial satisfaction (Hackman and Lawler, 1971) with particular aspects of their job. Table 36 summarizes the average responses for these items as reported by senior and intermediate level managers. The overall means for the entire population, for large size firms as well as for medium size firms, are also given. Also included are the critical Z-ratio values for all categories from the Mann-Whitney, U-Test.

TABLE 36

SPECIFIC SATISFACTION ITEMS ACCORDING TO LEVEL OF MANAGEMENT

Item	Senior (N=58)	Intermediate (N=58)	Z-Value	Significance *
Personal growth & development	4.55	4.72	-0.426	NS
Self-esteem from job	5.91	5.35	-0.023	NS
Opportunity for independent thought	6.20	5.86	-1.372	NS
Prestige inside company	5.88	5.23	-0.211	NS
Close supervision	2.21	3.02	-0.388	NS
Security	5.71	5.61	-1.327	NS
Pay	5.25	4.93	-2.423	S
Development of friendship	4.70	4.53	-0.655	NS
Promotion	3.86	4.46	-0.747	NS
Fair treatment from boss	5.56	5.63	-1.455	NS
Feeling of accomplishment	5.68	5.68	-1.223	NS
Participation in decisions	5.94	5.51	-1.023	NS
Mean for all	5.14	5.38	-1.513	NS
Mean for large size firms	5.06 (N=31)	5.32 (N=30)	-0.036	NS
Mean for Medium size firms	5.25 (N=27)	5.43 (N=28)	-2.021	S

S = Significant at 0.05 level

NS = Not significant at 0.05 level

Table 36 indicates that the differences between the specific satisfaction measures based on levels of management are not significant for the entire population except for "pay", where senior managers reported a significantly greater satisfaction as compared to the intermediate managers. The mean score for large size firms does not show any significant differences whereas for the medium size firms, the intermediate managers reported a significantly greater satisfaction as compared to the senior level managers.

JOB DESIGN

An independent measure of job design was computed by averaging the responses to the following specific items relating to job characteristics.

- Opportunity to do complete job
- Amount of close supervision received
- Opportunity to do challenging work
- Pay
- Opportunity to do a number of things
- Opportunity to do the whole job
- Promotion
- Respect and fair treatment from the boss

Table 37 shows the average scores for job design for various variables of the study. Also included are the corresponding t-ratio values. The results are graphically shown in Figure 4.

TABLE 37

MEAN JOB DESIGN SCORE ACCORDING TO VARIABLES OF STUDY

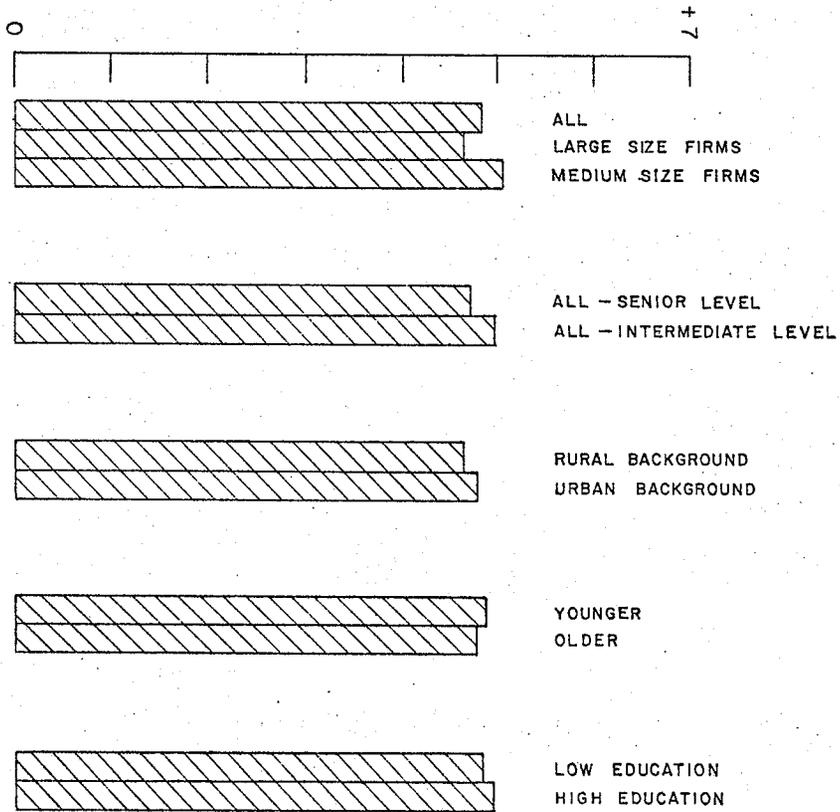
Variables of Study	Mean Job Design Score	Sample Size	t-ratio	Significance*
1. Level of Management				
Senior	4.707	58	1.1266	NS
Intermediate	4.972	58		
2. Size of Firms				
Large	4.645	61	1.7496	S
Medium	5.055	55		
3. Early Life				
Rural	4.656	24	0.7931	NS
Urban	4.887	92		
4. Age				
Younger	4.885	65	0.4315	NS
Older	4.782	51		
5. Level of Education				
Low Education	4.805	84	0.4713	NS
High Education	4.930	32		

* NS = Not significant at 0.05 level (two tailed t-test)

S = Significant at 0.05 level

It can be seen from Table 37 that in general none of the t-ratio values are significant for the two-tailed t-test (except for size of the firm) and thus the job design items used do not appear to be significantly influenced by the variables of the study. It is however interesting to note that intermediate manager's reported somewhat higher scores than senior managers. The managers in medium size firms reported significantly higher scores as compared to manager's in the large size firms. The effect of age, education and early life of a manager are not that pronounced.

FIGURE 4. MEAN JOB DESIGN SCORES VERSUS VARIABLES OF STUDY.



HIGHER-ORDER NEED STRENGTH

The moderating effect of desired higher order needs has been studied by others (Hackman and Lawler, 1971; Brief and Aldag, 1975). Hackman and Lawler compared the relationships between the core-dimensions and each dependent variable for those respondents whose scores fell into the top third of the desired higher-order need strength distribution, with those whose scores fell into the bottom third of the distribution. They concluded that higher order need strength acts as a moderating variable except for relationships involving task identity. Brief and Aldag (1975) attempted to replicate these findings but found only partial success and questioned the assumed straight forward role of desired higher-order need strengths as depicted by Hackman and Lawler.

In the present study, the higher order need strength was established by averaging responses to twelve items previously used by Hackman and Lawler. This was done to compare our findings to those of others. These items asked each respondent as to how much of various opportunities and attributes the employees' would like to have on their own job. Contents of the questionnaire ranged widely, and included items pertaining to pay, promotion, security, working conditions, peer relationships, and supervisory relationships. Twelve of the items were judged on a priority basis to measure desire for higher order need satisfactions. These items are -

- Opportunity for personal growth
- Opportunity for independent thought

- Opportunity to find how I am doing
- Opportunity to complete the work I start
- Opportunity to do challenging work
- Feeling that performing job well or poorly
- Opportunity to do a number of things
- Opportunity to do the whole job
- Freedom to do pretty much what I want
- Variety in the job
- Feeling of worthwhile accomplishment
- Participation in job-related decisions

Proposition 4. Senior Level managers will have significantly more desired high-order need strength, as compared to intermediate level managers (i.e. the higher the level of management, the more the desired high-order need strength).

The mean value of the higher order need strength for the entire population of Manitoba managers was found to be 5.831 and this is fairly high. Table 38 shows the distribution of the higher-order need strength for various variables of the study. Also included are the corresponding t-ratio values. The results are graphically shown in Figure 5.

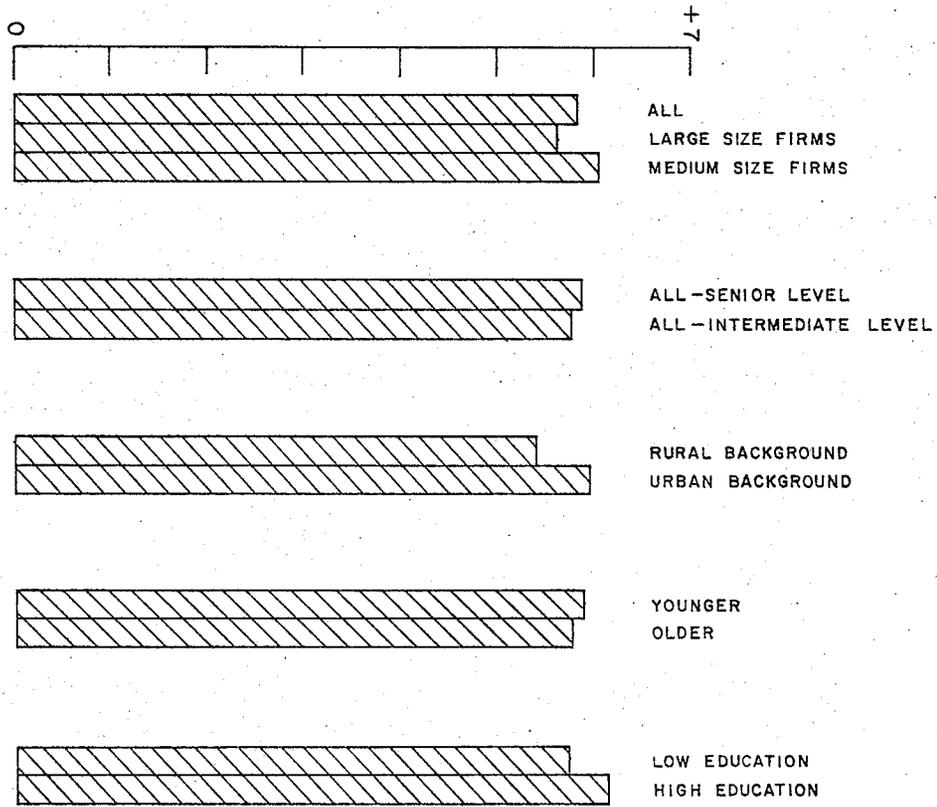
TABLE 38

MEAN DESIRED HIGHER-ORDER NEED STRENGTH ACCORDING TO VARIABLES OF STUDY

Variables of Study	Mean desired Higher order need strength	Sample Size	t-ratio	Significance*
1. Level of Management				
Senior	5.885	58	0.4279	NS
Intermediate	5.777	58		
2. Size of Firms				
Large	5.637	61	1.6527	NS
Medium	6.047	55		
3. Early Life				
Rural	5.396	24	1.7975	S
Urban	5.945	92		
4. Age				
Younger	5.886	65	0.4911	NS
Older	5.761	51		
5. Level of Education				
Low Education	5.720	84	1.4464	NS
High Education	6.122	32		

* NS = Not significant at 0.05 level (two-tailed t-test)
S = Significant at 0.05 level

FIGURE 5. MEAN DESIRED HIGHER-ORDER NEED STRENGTH VERSUS VARIABLES OF STUDY.



It can be seen from Table 38 that none of the t-ratio values are significant for the two-tailed t-test (except for rural/urban background) and thus the higher need strength has not been shown to be significantly influenced by these variables. It is, however interesting to note that senior managers reported somewhat higher scores than intermediate managers. The managers in medium size firms show higher scores as compared to those in the large size firms. Young managers report somewhat higher scores as compared to older managers. However, based on early life, urban managers reported a significantly higher, desired high order need strength as compared to managers from a rural background. This finding is contrary to the findings of Hackman and Lawler (1971). It must be pointed out that their definition of rural/urban background differs from that of our study (Chapter V). In terms of level of education, managers with a high educational level (College degree or more) reported somewhat higher scores for desired high order need strength. All these trends are explainable and consistent with the findings reported elsewhere in the dissertation.

Proposition 5 - A manager's perception of his job's four core dimensions (i.e. variety and challenge, autonomy, task identity and feedback) will be positively correlated to measures of satisfaction and job design.

Table 39 shows the general correlations between the core-dimensions and the specific satisfaction items, and the mean measures of job design.

Nearly all of the specific satisfaction items, mean satisfaction and mean job design were significantly positively correlated with the descriptions of jobs on the core-dimensions. This is to be

TABLE NO. 39
INTERCORRELATIONS AMONG VARIOUS VARIABLES

VARIABLES	CORE DIMENSIONS, SPECIFIC SATISFACTION AND MEAN JOB DESIGN																			
	\bar{X}	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
A. CORE DIMENSIONS																				
1. Variety and challenge	5.58	1.57	1.00																	
2. Autonomy	5.62	1.43	0.82	1.00																
3. Task identity	5.67	1.58	0.68	0.69	1.00															
4. Feedback	5.11	1.60	0.56	0.55	0.69	1.00														
B. SPECIFIC-SATISFACTION																				
5. Personal growth	4.64	1.84	0.46*	0.37*	0.33*	0.34*	1.00													
6. Self-esteem	5.63	1.29	0.31*	0.39*	0.27*	0.16	0.42*	1.00												
7. Independent thought	6.03	1.22	0.52*	0.74*	0.43*	0.29*	0.46*	0.36*	1.00											
8. Prestige inside company	5.55	1.28	0.34*	0.35*	0.36*	0.16	0.48*	0.74*	0.37*	1.00										
9. Close supervision received	2.63	1.70	0.03	-0.06	-0.12	0.05	0.00	-0.00	-0.13	0.01	1.00									
10. Security	5.66	1.45	0.29*	0.36*	0.41*	0.40*	0.46*	0.27*	0.50*	0.36*	-0.08	1.00								
11. Pay	5.09	1.38	0.36*	0.43*	0.30*	0.19*	0.37*	0.38*	0.34*	0.49*	0.02	0.45*	1.00							
12. Development of friendship	4.61	1.74	0.42*	0.34*	0.36*	0.26*	0.31*	0.14	0.25*	0.18	0.17	0.36*	0.13	1.00						
13. Promotional opportunity	4.18	2.07	0.38*	0.25*	0.30*	0.29*	0.62*	0.24*	0.33*	0.26*	0.21*	0.41*	0.31*	0.23*	1.00					
14. Fair treatment from boss	5.57	1.48	0.38*	0.50*	0.49*	0.42*	0.41*	0.49*	0.41*	0.48*	0.06	0.55*	0.42*	0.33*	0.43*	1.00				
15. Feeling of accomplishment	5.65	1.33	0.56*	0.53*	0.61*	0.49*	0.53*	0.50*	0.46*	0.56*	0.03	0.52*	0.39*	0.38*	0.40*	0.57*	1.00			
16. Participation in decisions	5.72	1.41	0.56*	0.82*	0.44*	0.51*	0.43*	0.42*	0.56*	0.41*	-0.05	0.37*	0.38*	0.26*	0.24*	0.48*	0.48*	1.00		
17. Mean-satisfaction	4.87	1.16	0.78*	0.80*	0.71*	0.61*	0.65*	0.53*	0.55*	0.54*	0.25*	0.59*	0.58*	0.50*	0.62*	0.70*	0.75*	0.62*	1.00	
C. MEAN-JOB DESIGN																				
	4.84	1.27	0.80*	0.73*	0.81*	0.64*	0.44*	0.30*	0.44*	0.35*	0.29*	0.45*	0.55*	0.40*	0.70*	0.70*	0.65*	0.49*	0.91*	1.00

* p < 0.05 two tailed test
Number of respondents = 16

expected since the core dimensions relate substantially to overall job satisfaction - since overall satisfaction is likely to be strongly influenced by satisfaction with the particular aspect of the work situation addressed by the twelve specific items. It is useful, however, to examine which of the satisfaction items are especially strongly related to the core dimensions, and which have negligible relationships. Items with consistently strong relationships to the core dimensions should be considered especially sensitive to differences on these dimensions, whereas, those items with weak relationships should be considered not as responsive to differences in job design. This should be helpful, therefore, in fully understanding the kind of effects that the core dimensions have on an employee's reaction to his job.

The four specific items most strongly related to the core dimensions are (in descending order) (a) Participation in job related decisions (b) feeling of worthwhile accomplishment (c) opportunity of independent thought and action, (d) the amount of respect and fair treatment received from the boss.

The four specific items least strongly related to the core dimensions are (in ascending order) (a) amount of close supervision received, (b) the opportunity for promotion (c) the pay for my job (d) prestige inside the company.

It appears, as expected, that the four core dimensions by and large, seem to be most strongly related to the satisfaction of higher order needs. The satisfaction items which are the least related to the four core dimensions seem to be most relevant to the satisfaction of needs classified as lower-order in the hierarchies of Maslow (1973) and

Alderfer (1969). These results in general are in line with those of Hackman and Lawler (1971).

Proposition No.5a - a manager's perception of his job's four core dimensions (i.e. variety and challenge, autonomy, task identity and feedback) will be positively correlated to specific satisfaction items for those with high higher-order need strength, and it will be higher than the relationships for managers with low higher-order need strength.

For testing this proposition the correlations between core dimensions and dependent variables were computed separately for those managers whose higher order need strength scores were in the top one-third of the distribution of scores for all respondents, and for those managers whose scores were in the bottom one-third of the same distribution. Specifically, separate correlations were computed for those managers with desired higher order need strength greater than 6.30 and for those less than 5.50. It was expected that the relationships for the bottom third would be lower in magnitude than the relationships for the top third of the distribution. It was also expected that the relationship found for the top third should be stronger than the one for all respondents.

Table 40 shows the results of the analysis.

TABLE 40
MODERATING EFFECT OF DESIRED HIGHER ORDER NEEDS
CORE DIMENSIONS VERSUS SPECIFIC SATISFACTION ITEMS

Dependent Variable Satisfaction Item	Variety & Challenge		Autonomy		Task Identity		Feedback	
	High Str.	Low Str.	High Str.	Low Str.	High Str.	Low Str.	High Str.	Low Str.
1. Personal growth	0.44*	0.16	0.39*	0.08	0.40*	-0.05	0.38*	-0.18
2. Self-esteem	0.15	0.22	0.39*	0.25	-0.09	0.09	0.00	-0.17

TABLE 40 (cont'd)

Dependent Variable Satisfaction Item	Variety & Challenge		Autonomy		Task Identity		Feedback	
	High Str.	Low Str.	High Str.	Low Str.	High Str.	Low Str.	High Str.	Low Str.
3. Independent thought & action	0.27	0.44*	0.77*	0.65*	0.42*	0.38*	0.09	0.20
4. Prestige inside company	0.17	0.07	0.38*	0.00	-0.04	0.06	0.08	-0.20
5. Close supervision	0.04	-0.23	-0.04	-0.23	-0.16	-0.29	0.02	-0.08
6. Security	0.34*	0.23	0.32*	0.41*	0.49*	0.32*	0.41*	0.26
7. Pay	0.24	0.53*	0.32*	0.57*	0.12	0.58*	0.19	0.14
8. Development of Close Friendship	0.34*	0.61*	0.19	0.59*	0.21	0.36*	0.09	0.54*
9. Promotion	0.34*	0.23	0.27	0.03	0.36*	0.30	0.22	0.31
10. Fair treatment from boss	0.16	0.57*	0.44*	0.57*	0.33*	0.68*	0.38*	0.21
11. Feeling of accomplishment	0.52*	0.69*	0.17	0.75*	0.20	0.57*	0.19	0.09
12. Participation in decisions	0.55*	0.68*	0.77*	0.87*	0.35*	0.70*	0.42*	0.61*
Average Satisfaction	0.47*	0.83*	0.50*	0.89*	0.36*	0.74*	0.31	0.61*

* Significant at 0.05 level (two-tailed test)

The results presented in Table 40 of the analysis do not show an explicit support of the proposition. Although in some cases, managers with higher desired high-order need strength show higher positive relationships with those managers who have lower desired high-order need strength, there are quite a few cases where the reverse is also true. Thus in our study of managerial jobs in Manitoba, we have not found as clear a relationship as Hackman and Lawler (1971) found in their study of telephone company employees. Whether this is because of differences in desired high-order need strengths of managers and workers or whether the role of these high order need strengths is complex, as suggested

by Brief and Aldag (1975), is difficult to say without further empirical studies or indepth examination of underlying correlations.

FACTOR ANALYSIS

A factor analysis was carried out for the twenty items of Part III of the questionnaire along with mean measures of specific satisfaction and job design. The items selected were responses to part (a) of each question.

Basically, factor analysis is a technique for representing a large number of variables in a more concise form. This is accomplished by determining inter-relationships between variables, and eliminating duplicate information. There are two types of analysis: R and Q type. The R type analysis consists of factor analyzing a matrix with variables referring to the characteristics of entities, and the cases being the entities themselves. Q type is the transpose of this matrix. The R type analysis was used in this study as our interest was to describe the individuals along certain undefined dimensions, and not the reverse.

A factor analysis consists of three ordinary steps (a) preparation of the correlation matrix of all variables (b) extraction of the initial factors i.e. the data reduction function and (c) the rotation of the significant factors to a terminal solution. Each step involves a choice of options in the SPSS program.

The R-type factor analysis was selected, as noted above, and a correlation matrix was prepared for step one of the factor analysis. In step two, two basic techniques were considered for extracting factors: principal-components and principal-factor. In a principal-component analysis, the correlation matrix is left unaltered, thus the diagonal remains 1.0. This results in a systematic selection of factors beginning

with the one with the greatest explanatory power and moving down. The second technique involves the replacement of the main diagonal with estimates of communality. Communality is defined as the proportion of a variable sharing something in common with all other variables in the set, thus it cannot be smaller than the squared multiple correlation between a variable and others in the set. The basic assumption underlying this technique is that only some portions of the variables are involved in the patterning, and by removing the common sources of variance, the remaining correlations between variables will all become zeros. In other words, each variable has a unique variance not involved with any other variable. By replacing the diagonal elements in the correlation matrix, in effect, this unique variance of each variable is removed, leaving only the remaining portion of the variable. Theoretically, this approach is superior to the principal-component technique, although there is one problem. The minimum diagonal is the squared multiple correlation, and the ceiling is 1.0. However, no one has yet accurately determined the exact value of the diagonals required to split each variable accurately. In step two thus, the principal-factor technique was selected because of its theoretical superiority.

The first decision in step three is to determine the number of factors to rotate. Although several criteria exist to aid in the decision, there is no definite cut-off point. The scree test is the one most widely used, (Rummel, 1970). The proportion of total variance explained by each factor is plotted against the factor number. The cut-off point is where the curve flattens. Another criterion is a big drop in the explanatory power from one factor to the next. A most

common point is to cut-off all factors with eigen values less than one. Several other techniques exist such as meaningfulness, interpretability, strength of relationship, etc. but most are redundant. In our study, only those factors which had a eigen value greater than one were used for rotation. Most analysts agree that rotating too few factors can distort the factor structure. The effect of using too many factors is not clear. It is generally considered that it is more critical that significant factors not be eliminated.

Once the method for selection of the required number of factors was decided, the next step was the selection of the method of rotation. Rotation optimizes the variables fit with one or more of the factors. The decision is between orthogonal rotation and oblique rotation. Orthogonal rotation produces uncorrelated factors i.e. factors at right angles in n- space. In oblique rotation, factors can be rotated freely with no correlation restriction. The most commonly used technique is the VARIMAX orthogonal rotation, which concentrates on simplifying the columns of the factor matrix. This, in effect, is the process of fitting each variable to one or more factors and eliminating partial loadings as much as possible.

In summary then, twenty items of need fulfillment and two items of satisfaction were factor analyzed to obtain further information on their structure in relation to Maslow's need categories. These twenty two items were intercorrelated and the matrix of intercorrelation was factored by a principal axis method with squared multiple correlations in the diagonal of the matrix. Four factors with eigen value greater than unity were selected and rotated to a VARIMAX solution using the SPSS. This technique has been previously used by others (Payne, 1970;

Roberts et al, 1971; Waters and Roach, 1973)

The factor loading of satisfaction variables is given in Table 41 along with their loadings and communalities(h^2). Four distinct factors were obtained as under:

Factor I. This factor has been defined as relating to interpersonal relationships and friendship. Most of the items go quite well with each other. The only surprising exception is the variable representing worthwhile accomplishment.

Factor II. This group factor seemed to represent esteem or prestige and included pay and fair treatment and respect from boss. This factor generally corresponds to lower order needs and to items relating to extrinsic satisfaction. The mean measure of satisfaction is also loaded on this factor.

Factor III. This factor was interpreted as higher order need fulfillment. All of the items pertaining to self-actualization and autonomy categories loaded above criterion level. The measure of job design also loaded on this factor which would imply that satisfaction with intrinsic aspects of work situation are more related to the measure of job design than to the satisfaction measure.

Factor IV. This factor was identified as relating to promotion and close supervision.

TABLE 41

FACTOR LOADINGS OF SATISFACTION VARIABLES

Variable Description	Loading	Communalities (h^2)
FACTOR I		
Feedback	.49	.28
Doing complete work	.67	.60
Security	.66	.59
Performing job well	.60	.41
Close friendship	.56	.45
Doing whole job	.77	.73
Worthwhile accomplishment	.62	.69
FACTOR II		
Esteem	.84	.75
Prestige inside company	.82	.77
Pay	.63	.55
Fair treatment and respect from boss	.53	.61
Mean satisfaction	.56	.98
FACTOR III		
Growth	.44	.60
Independent thought	.70	.69
Challenging work	.59	.58
Doing different things	.87	.83
Doing what you want	.51	.46
Variety in job	.68	.58
Participation	.54	.52
Mean Job Design	.55	.94
FACTOR IV		
Close Supervision	.79	.66
Promotion	.64	.65

...

While the factors obtained in this study are not directly comparable with those obtained in the previous three studies, yet the results of the present study are in agreement in that items frequently used to represent the Maslow need categories do not cluster as a priori classified according to the Maslow system. It does appear that Porter-type items can be used to differentiate higher and lower order need fulfillment. The results of this finding however, suggest that the measure of job design (as compared to the measure of specific satisfaction) is better related to the fulfillment of higher order needs.

In this chapter we have covered considerable ground and a recapitulation is in order. The chapter was started with the results of a manager's perception of core-dimensions of the job. The measures of specific satisfaction and mean job design and higher-order need strength were presented next. The moderating effect of higher-order needs was analyzed and a brief report on factor analysis of the need fulfillment items has been included. A summary of the findings is as follows:

1. Senior level managers have a significantly higher perception about the core dimension of autonomy. Being the men at the top they are the decision makers and thus the findings are understandable.
2. Managers in the medium size firms have significantly higher perceptions for the dimensions of autonomy and task identity. It appears that because of a small firm size, these managers have more say in scheduling their work and can identify the results of their efforts much better. In fact, the senior managers in medium size firms rate the highest in terms of their perceptions about autonomy.

3. A manager's early life does not significantly influence his perception about the various core-dimensions at work.
4. Age does not influence in any significant way a manager's perception of his core-dimensions.
5. The level of education shows a slight positive relationship with core-dimensions i.e. managers having higher education have a somewhat higher perception of their core-dimensions.
6. The data is very suggestive with respect to a manager's area of specialization and his perception of the four core-dimensions. Managers in the area of finance and accounting scored highest on the dimension of task identity, managers in marketing and sales scored highest on the dimensions of variety, autonomy and friendship opportunities, and managers in production reported highest scores for feedback. The managers in general management reported somewhat lower scores for each dimension.
7. The concept of the measure of the job design, introduced in this chapter, is very promising. The study has indicated that the level of management, age, education and early life of a manager does not significantly influence his perception of the items of job design. Only in the case of the size of the firms studied, managers in medium size firms reported significantly higher scores as compared to the managers of the large size firms. Based on the results of the factor analysis, the mean job design appears to be related to fulfillment of higher-order needs.

8. A manager's perception of his job's four core dimensions, variety and challenge, autonomy, task identity and feedback, are positively correlated to specific satisfaction items and mean measure of job design. The four specific items most strongly related to core-dimensions are (in descending order) (a) participation in job related decisions (b) feeling of worthwhile accomplishment (c) opportunity of independent thought and action and (d) the amount of respect and fair treatment received from the boss. The four specific items least strongly related to the core dimensions are (in ascending order) (a) amount of close supervision (b) the opportunity for promotion (c) the pay for my job and (d) prestige inside the company.
9. In terms of the desired higher-order need strength the results suggest the following:
 - (a) senior level managers have somewhat higher desired high-order need strength as compared to intermediate managers.
 - (b) medium size firm managers have somewhat higher desired high-order strength as compared to the managers of the large size firms.
 - (c) younger managers have somewhat higher desired high order need strength as compared to the older managers.
 - (d) managers with urban background have significantly higher desired high-order need strength as compared to those from rural background.
10. The role of desired higher order need strength as a moderator on a manager's perception of core dimensions and job characteristics, appears to be very complex.
11. The results of the factor analysis indicates that the Porter-type items can be used to differentiate between high and low order need categories.

This concludes the analysis associated with core-dimensions, specific satisfaction and higher order need strength. Another measure of satisfaction, Job Descriptive Index, was incorporated in the present study and the next chapter summarizes the findings related to JDI.

CHAPTER VII

JOB DESCRIPTIVE INDEX AS A MEASURE OF SATISFACTION

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JOB DESCRIPTIVE INDEX AS A MEASURE OF SATISFACTION

The Job Descriptive Index (JDI), as a measure of satisfaction in work, has been successfully used in many previous studies. (Smith et al, 1969; Hulin, 1969; Herman and Hulin, 1973; Gillet and Schwab, 1975). Out of these studies, the one by Hulin (1969) is of particular interest, as it was conducted in a Canadian setting. Two community towns in British Columbia were studied to examine the influence of community characteristics on job satisfaction.

In the present study, measures of managerial satisfaction were obtained, with actual work done, pay, promotional opportunities, supervision and co-workers, using the JDI. The JDI is an accumulative point adjective check-list measure of job satisfaction, which possesses adequate convergent and discriminant validity for individual analysis (Quinn and Kahn 1967; Smith, 1967; Vroom, 1964).

Proposition No. 6 - Levels of satisfaction (JDI) will be positively correlated with a manager's level of hierarchy in the organization (i.e. the higher the level of management, the greater the degree of satisfaction.)

Table 42 gives the JDI scores for the entire population based on levels of management. Also given are the critical Z-ratio values from the Mann-Whitney U-Test.

TABLE 42

LEVEL OF MANAGEMENT AND JOB DESCRIPTIVE INDEX SCORES

JDI Item	Level of Management		Z-Ratio	Significance*
	Senior (N=58)	Intermediate (N=58)		
Work	37.741	37.414	-0.136	NS
Pay	16.724	16.414	-0.181	NS
Promotion	11.397	15.000	-1.551	NS

Supervision	23.690	35.310	-2.851	S
Co-Workers	35.500	34.931	-0.355	NS

*S = Significant at 0.05 level NS = Not significant at 0.05 level

Table 42 shows that, the JDI scores, based on the levels of management, do not show significant differences except in the area of supervision. The intermediate managers reported a significantly higher satisfaction with supervision as compared to the senior level managers. The intermediate managers also reported higher levels of satisfaction with promotional opportunities as compared to their senior counterparts.

These results do not support the proposition as formulated and are at variance with previous findings (Smith, et al, 1969; Herman and Hulin, 1973). However, the results are explainable in the present case as the senior level managers have reached the top of the hierarchy and have no place to go. Consequently, there perception about promotional opportunities and supervision received is clouded. In this context, it would be questionable even to use JDI for the top senior manager to measure the degree of satisfaction.

Table 43 shows the JDI scores for the entire population based on the size of the firm.

TABLE 43
SIZE OF FIRM AND JOB DESCRIPTIVE INDEX SCORES

JDI Item	Size of Firm		t-ratio	Significance*
	Large (N=61)	Medium (N=55)		
Work	37.623	37.527	0.0281	NS
Pay	10.451	9.874	0.0692	NS
Promotion	13.721	12.618	0.5393	NS
Supervision	29.721	29.255	0.1132	NS
Co-Workers	35.443	34.964	0.1266	NS

*NS = Not significant at 0.05 level (two-tailed t-test)

The results of Table 43 indicate that size of the firm does not significantly affect a manager's perception of the JDI items.

Table 44 shows the JDI scores for the entire population based on rural/urban background of the managers and the critical Z-ratio values based on the Mann-Whitney U-Test.

TABLE 44
RURAL/URBAN BACKGROUND AND JOB DESCRIPTIVE INDEX SCORES

JDI Item	Rural Background (N=24)	Urban Background (N=92)	Z-Value	Significance*
Work	32.542	38.891	-0.603	NS
Pay	14.542	17.098	-0.797	NS
Promotion	12.458	13.391	-0.815	NS
Supervision	26.250	30.348	-1.049	NS
Co-Workers	30.417	36.467	-1.808	S

NS = Not Significant at 0.05 level
* S = Significant at 0.05 level.

The urban managers consistently reported higher scores for satisfaction for each area as compared to managers from a rural background. The difference in the area of supervision is quite high but not significant, whereas for co-workers, it is significant. It is interesting to recall here that managers from an urban background reported somewhat higher perceived need fulfillment as well as higher perceived need importance for social needs, as compared to managers from a rural background. It could be, that their significantly higher satisfaction with co-workers may be related to this perception.

Table 45 shows the JDI scores based on a manager's age. Also included are values of the t-ratio.

TABLE 45

AGE AND JOB DESCRIPTIVE INDEX SCORES

<u>JDI Item</u>	<u>Younger manager</u>	<u>Older manager</u>	<u>t-ratio</u>	<u>*Significance</u>
Work	39.662	34.922	1.435	NS
Pay	17.508	15.373	1.127	NS
Promotion	15.615	10.118	2.756	S
Supervision	32.277	24.686	2.112	S
Co-Workers	37.215	32.667	1.204	NS

*NS = Not significant at 0.05 level (two-tailed t-test)

S = Significant at 0.05 level

It can be seen from Table 45 that younger managers consistently reported somewhat higher JDI scores as compared to their older counterparts. In fact for the JDI items of promotion and supervision, the younger managers reported a significantly higher satisfaction as compared to the older managers. Although the data is significantly in favor of younger managers, some caution in interpretation is necessary. A majority of older managers are at senior levels of management (Table 9) and hence their scores for supervision and promotion could be low because of their being at the top.

Table 46 shows the JDI scores based on a manager's level of education. Also included are the values of the t-ratio.

TABLE 46

LEVEL OF EDUCATION AND JOB DESCRIPTIVE INDEX SCORES

<u>JDI Item</u>	<u>Low Education</u>	<u>High Education</u>	<u>t-ratio</u>	<u>*Significance</u>
Work	36.333	40.844	1.227	NS
Pay	16.179	17.594	.671	NS
Promotion	13.488	12.438	.460	NS
Supervision	27.429	34.938	1.650	NS
Co-Workers	33.714	39.156	1.298	NS

*NS = Not significant at 0.05 level (two tailed t-test)

Table 46 indicates that, in general, managers with higher levels of education, reported higher scores for the various items of JDI. The

t-ratio values however, do not indicate significant differences. In a separate study, Tersine and Altimus (1974) compared the JDI scores for two skill level groups for blue collar workers and reported significant differences for scores of work and pay factors with high-skill group being more satisfied than the low skill workers. Although we have compared the levels of education rather than job skills needed and have taken managerial jobs rather than blue collar workers, yet our results show somewhat similar trends.

Table 47 shows the JDI scores based on a manager's area of specialization.

TABLE 47

AREA OF SPECIALIZATION AND JOB DESCRIPTIVE INDEX SCORES

JDI Item	Area of Management			
	General	Finance & Accounting	Marketing & Sales	Production
Work	34.871	39.941*	39.129	37.459
Pay	16.290	19.118*	16.806	15.432
Promotion	9.581	17.000*	15.871	12.243
Supervision	19.000	36.059	37.452*	28.622
Co-Workers	31.161	37.059	41.032*	32.892

* Highest mean scores for JDI Item

It is very interesting to note that the managers in the Finance and Accounting area were most satisfied in such areas as work, pay and opportunities for promotion. Marketing and Sales managers were most satisfied on such areas as supervision and co-workers. These results can be explained in terms of the nature of the work in the various areas of specialization considered.

In this chapter an analysis, of the JDI items as measures of satisfaction, was presented in relation to various variables of the study. The major findings are as follows:

1. Levels of satisfaction (JDI) were found to be negatively correlated to a manager's level of hierarchy in the organization i.e. the lower the level of management, the higher was the level of satisfaction. This is explained in terms of senior managers being at top and having a clouded perception about items like promotion and supervision, etc. This raises some questions about the use of JDI as a measure of satisfaction for senior level managers.
2. The size of the firm does not make a significant difference in a manager's perception of satisfaction (JDI scores).
3. Urban background managers, reported higher levels of satisfaction as compared to those with a rural background. This could be related to the higher desire for social needs on the part of managers from an urban background.
4. Younger managers reported significantly higher levels of satisfaction (JDI scores) as compared to older managers. Caution in interpretation is necessary as older managers are mostly at a senior level and could have scored low on such items as promotion, supervision received, etc. since they are already at the top.
5. The level of education does not make a significant difference in a manager's perception of satisfaction (JDI scores). It may be noted however, that managers with higher levels of education reported a somewhat higher satisfaction as compared to those with lower levels of education.

With the results reported in this chapter, the main areas of the present study have now been covered. Chapter V dealt with the area of Need Fulfillment and Chapters VI and VII dealt with Job-Characteristics. The next chapter summarizes the findings based on occupational stress and

general health and is followed by summary conclusions and policy implications in chapter IX.

CHAPTER VIII

OCCUPATIONAL VALUES, OCCUPATIONAL STRESS AND GENERAL
HEALTH

CHAPTER VIII

OCCUPATIONAL VALUES, OCCUPATIONAL STRESS AND GENERAL HEALTH

It has generally been reported in the literature that there is an emerging shift in occupational values. A contemporary manager is no longer interested in a conventional career working through an administrative hierarchy of an organization, especially a bureaucratic organization. They object to authoritarian supervision and instead, have a preference for a consultative - participative relationship with their superior. There is a tendency for a contemporary manager towards rejection of narrowly defined jobs. They have preference for independence, individual responsibility, achievement and recognition. It was in this context that in the present study of managers, questions about 9 occupational values were included.

Table 48 shows the results of the analysis. Out of the total of 116 respondents, only 98 reported their preference for occupational values. In addition to overall responses, occupational values are also shown for two sizes of firms and two levels of management. The results are shown graphically in Figure 6.

TABLE 48
RANK ORDER OF OCCUPATIONAL VALUES
LEVEL OF MANAGEMENT AND SIZE OF FIRMS

	Rank	Total Managers	Large Size Firms		Medium Size Firms	
		% of Total N = 98	Senior N= 23	Intermediate N= 27	Senior N=24	Intermediate N=24
1. Challenge in work	1	36.5	1(34.6)	1(44.0)	1(24.9)	1(41.1)
2. Opportunities for achievement	2	29.4	1(34.6)	2(40.3)	3(16.7)	2(24.7)

TABLE 48(cont'd)

	Total Managers Rank	% of Total N = 98	Large Size Firms		Medium Size Firms	
			Senior N=23	Intermediate N=27	Senior N=24	Intermediate N=24
3. Independence	3	11.3	2(13.0)	6(0.0)	2(20.7)	3(13.0)
4. Good Salary	4	10.2	3(8.7)	5(3.7)	2(20.7)	5(8.3)
5. Opportunities for growth	5	7.4	5(4.3)	3(8.2)	5(8.3)	4(8.7)
6. Security	6	4.2	4(4.8)	6(0.0)	4(8.7)	6(4.2)
7. Good relations with coworkers	7	1.0	6(0.0)	4(3.8)	6(0.0)	7(0.0)
8. Good supervision	8	0	6(0.0)	6(0.0)	6(0.0)	7(0.0)
9. Status	8	0	6(0.0)	6(0.0)	6(0.0)	7(0.0)
10. Others	8	0	6(0.0)	6(0.0)	6(0.0)	7(0.0)

Although the total number of respondents in the four sub-groups of Table 48 is not very large (N= 23 to 27), yet some very interesting conclusions can be drawn.

1. Challenge in work is consistently ranked first by the respondents of each sub-group. The opportunities for achievement, independence, good salary and opportunities for growth are consistently ranked within the first five rankings although not necessarily in the same order.
2. It is very difficult to explain the low rating of "independence" by the intermediate level of managers in large size firms. Surprisingly, these managers also rated "good relations with co-workers" higher than the other groups. This is however in line with these managers reporting a low need discrepancy for autonomy in an earlier section.
3. Security was rated high (fourth) by the senior levels of managers for both sizes of firms. This is consistent with the Manitoba manager's greater concern for security reported earlier. Also,

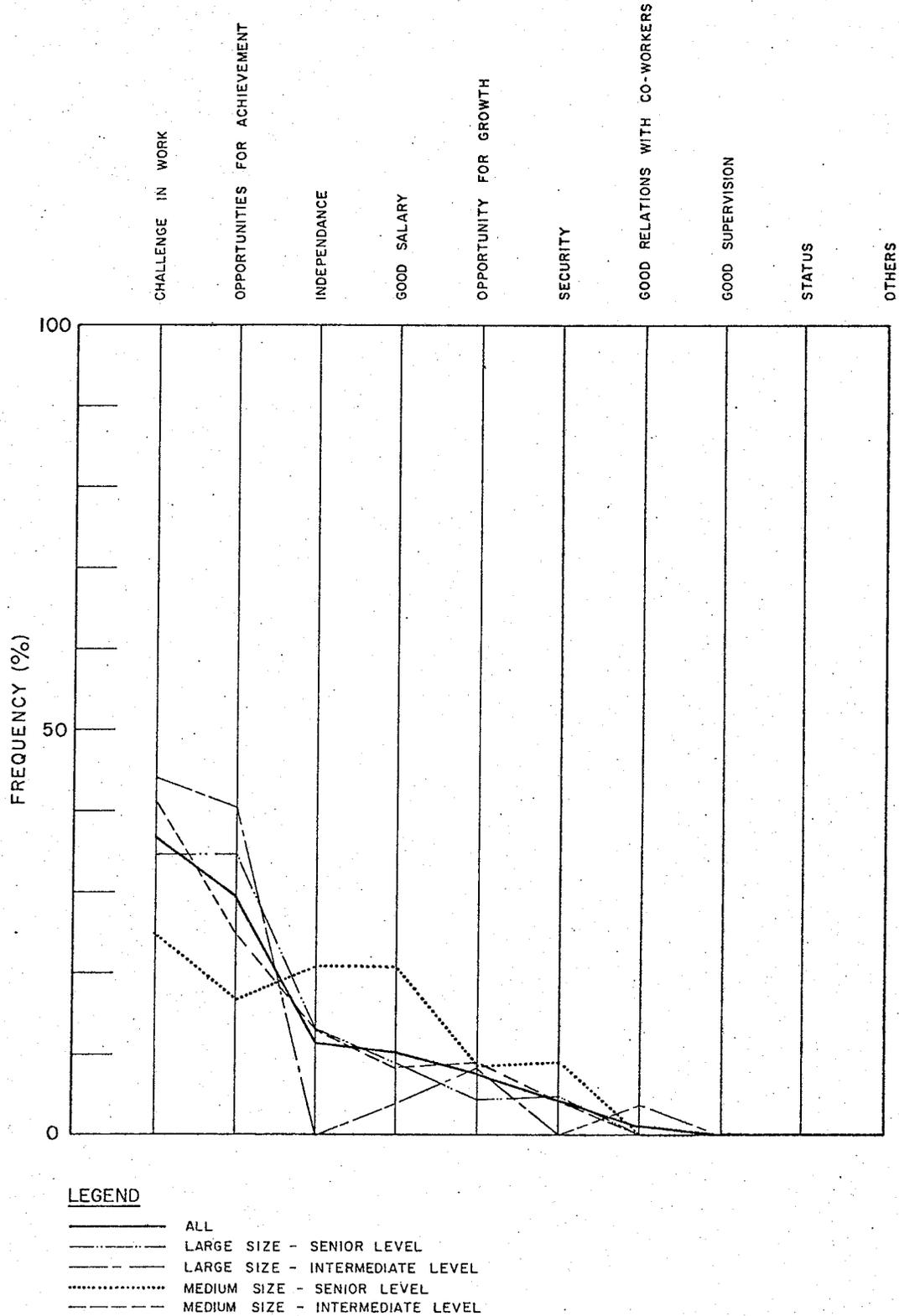


FIGURE 6. OCCUPATIONAL VALUES OF MANITOBA MANAGERS - SIZE OF FIRMS AND LEVELS OF MANAGEMENT

"good salary" was rated higher by senior managers than by the intermediate level managers. (Also refer to Table 36) Perhaps these results do indicate the occupational value characteristic of a senior business executive.

Table 49 gives the rank order of occupational values for Manitoba managers along with the results from a previous study, (Ondrack, 1973).

TABLE 49
RANK ORDER OF OCCUPATIONAL VALUES

MANITOBA MANAGERS VERSUS GRADUATE BUSINESS STUDENTS (MBA)

Occupational Values	Manitoba Manager (N=98)		Michigan (N=55)		Toronto (N=70)	
	Rank	% of Total Responses	Rank	% of Total Responses	Rank	% of Total Responses
1. Challenge in work	1	36.5	1	19.23	1	17.90
2. Opportunity for achievement	2	29.4	3	9.34	4	5.83
3. Independence	3	11.3	3	9.34	3	14.78
4. Good Salary	4	10.2	2	12.08	2	15.56
5. Opportunity for Growth	5	7.4	5	2.20	5	3.50
6. Security	6	4.2	7	0.54	7	1.16
7. Good relations with co-workers	7	1.0	7	0.54	7	1.16
8. Good Supervision	8	0	6	1.10	6	2.33
9. Status	8	0	4	2.74	8	0.77
10. Others	8	0	8	42.89*	9	37.01*

* These questionnaire's included 20 items and the balance of the percentage covers the remaining items.

In order of rank, the challenge in work was rated as first in the Manitoba study. Except for salary which was ranked fourth, all

the first five rankings are for items which incorporate a desire for independence, opportunities for challenging work, growth and achievement. Lower rankings were given to such items as security, good relations with co-workers, supervision, status, etc. In the Ondrack study, twenty occupational values of MBA students at Michigan and Toronto were analyzed and hence are not directly comparable to a Manitoba manager. However, the data is presented for interest sake, and only nine occupational values were used for comparison.

There are some striking similarities with the previous studies. The challenge in work was also ranked first in the Michigan and Toronto studies. Similarly, independence and opportunity for growth were ranked third and fifth respectively in all the studies. The first five rankings by and large went to the same five items, although not necessarily in the same order. One notable exception was the ranking for "good salary". In the Manitoba study, the salary was ranked fourth whereas in Michigan and Toronto studies it was ranked second. The Michigan and Toronto studies were on MBA students and it is quite probable, that being in a professional school, they had good employment opportunities as their prime objective.

The results of the analysis, by and large, show that the preference in occupational values is for items like challenge in work, independence, opportunities for achievement and growth. Such occupational values as security, good relations with co-workers, good supervision, status, etc. are consistently ranked lower.

OCCUPATIONAL STRESS

In the present study, questions on occupational stress and general health were included because of the implication that job dissatisfaction may contribute very significantly to heart disease. In fact in a recent report (Upjohn, 1973) it is noted that work role, work conditions, and other social factors may contribute about 75% to the risk factor leading to heart disease in America. Benson (1974) noted the following:

"Emotional stress is a well-known aspect of the modern Western world and is especially prevalent in the business community. Our society has experienced rapid technological progress; the business community has been an integral part of this progress and, like the rest of the business community have been forced to make certain behavioral adjustments - notably, a faster pace and a more pressure life - and behavioral adjustments of this sort induce stress. Although some individuals are aware of the physiologically harmful effects of stress, few know how to prevent or alleviate them. Victimized by a stressful world they have helped to create, many executives have accepted stress as a necessary component of their existence".

It is very difficult to define the concept of stress. In our study, occupational stress was measured by incorporating the job related tension index used by Kahn et al (1964). Fourteen items used by them in a national survey were included in the study. Respondents answered each question by choosing one of the five fixed alternative responses: Never; Rarely; Sometimes; Rather Often; Nearly all the time. These alternatives were assigned coding values of from 1 to 5 respectively. The respondents score was based on the average computed from all fourteen items. In this part of the analysis a respondent's stress-score was analyzed for specific variables of the study and to test the following proposition:

Proposition 7. Senior level managers will have higher levels of stress as compared to the intermediate level managers (i.e. the higher the level of management, the greater the degree of occupational stress)

Table 50 shows the mean stress scores for the various variables of the study. Figure 7 shows a graphical plot for illustration.

TABLE 50
OCCUPATIONAL STRESS ACCORDING TO VARIABLES OF STUDY

Variables of Study	Mean Occupational Stress	Sample Size	t-ratio	Significance*
1. Level of Management				
Senior	1.804	58	3.1147	S
Intermediate	2.209	58		
2. Size of Firm				
Large	1.961	61	0.7077	NS
Medium	2.057	55		
3. Early Life				
Rural	1.622	24	3.0137	S
Urban	2.107	92		
4. Age				
Younger	2.101	65	1.5889	NS
Older	1.887	51		
5. Level of Education				
Low Education	2.031	84	0.5712	NS
High Education	1.944	32		

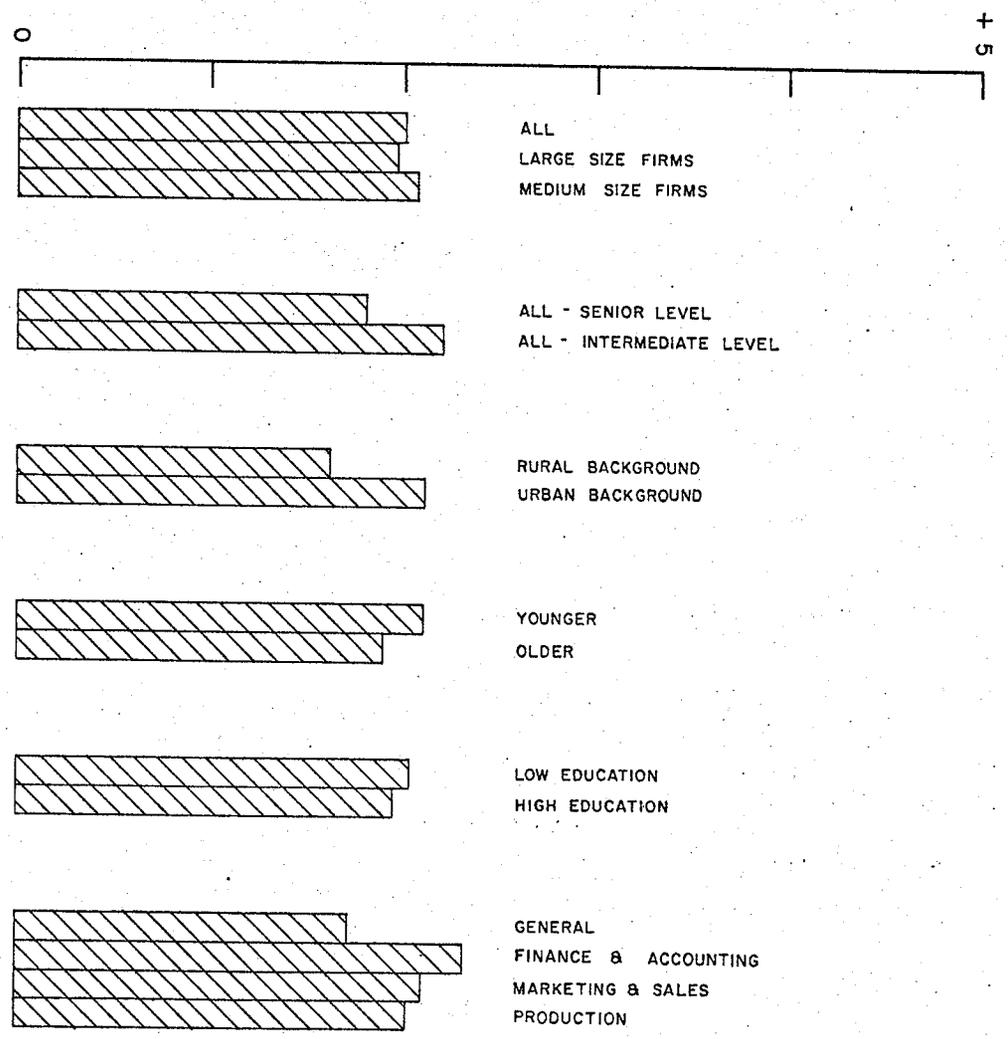
* NS = Not significant at 0.05 level (two tailed t-test)

S = Significant at 0.05 level

A review of the results presented in Table 50, shows some very interesting trends. These are summarized as follows.

1. Intermediate level managers reported a significantly higher mean stress score as compared to senior level managers. This negates the proposition as formulated. It could however be explained in terms of other findings of our study. Intermediate managers had a higher need discrepancy in general in the need categories and are exposed

FIGURE 7. MEAN OCCUPATIONAL STRESS VERSUS VARIABLES OF STUDY



to more anxiety and dissatisfaction. It could be attributable to their more often experiencing a role conflict and perhaps higher unsatisfied mobility aspirations (Kahn et al, 1964). It could be, as Chambers (1975) noted, that there is a gradual loss of executive authority of middle managers, because of a combination of union pressures and increased emphasis on participation by the work force on one hand, and important decisions being made at the top on the other hand.

2. The size of the firm did not significantly influence a manager's mean-stress score.
3. It is interesting to find that managers, with an urban background, have a significantly higher mean-stress score as compared to their counterparts with a rural background. These managers had a higher need discrepancy and a higher dissatisfaction with their jobs which could explain their increased degree of stress.
4. Although younger managers reported somewhat higher mean-stress scores as compared to older managers, the difference is not significant.
5. The level of education does not appear to significantly influence a manager's mean-stress score.

Table 51 shows the mean-stress scores based on a manager's area of specialization.

TABLE 51

AREA OF SPECIALIZATION AND MEAN OCCUPATIONAL STRESS

	<u>General Mgmt.</u>	<u>Finance & Accounting</u>	<u>Marketing and Sales</u>	<u>Production</u>
Mean Stress Score	1.707	2.307	2.118	2.027
Sample Size	31	17	31	37

The managers in the area of finance and accounting reported the highest mean-stress scores. These managers had higher unfulfilled needs and higher expectations in the need categories, and this dissatisfaction with conditions at work could be responsible for their high level of stress.

GENERAL HEALTH

Questions about general health were included in the study to specifically examine the occurrence of peptic ulcer among the Manitoba managers. The results were also reviewed to see if there was any suggestive relationship between the occurrence of occupational stress and peptic ulcer.

As reported earlier in the analysis, only 26.4% of the entire population of 116 respondents reported pain in the stomach within the last thirty days. Table 52 lists the occurrences based on the size of the firm and on the level of management.

TABLE 52

PAIN IN LAST THIRTY DAYS - LEVEL OF MANAGEMENT AND SIZE OF FIRM

<u>Level of Management</u>	<u>Large Size Firms</u>	<u>Medium Size Firms</u>	<u>Total</u>
Senior	7(25.9%)	9(33.3%)	16(29.6%)
Intermediate	6(21.4%)	7(25.0%)	13(23.2%)
Total	13(23.6%)	16(29.1%)	29(26.4%)

It is evident from the above figures, that only a small proportion of the Manitoba managers in the private industry, have occurrences of peptic ulcer. The vast majority are enjoying good health. Because of the small numbers of the sample involved within each sub-group (i.e. for large-size senior, intermediate; and Medium size-senior, intermediate), no definite conclusions are being drawn. It is interesting, however, to note that for the entire population as well as for each size of the firm, senior managers reported a somewhat higher occurrence of peptic ulcer as compared with intermediate level managers. This is a suggestive trend only. In the case of occupational stress, the intermediate level of managers reported a significantly higher mean stress score as compared to senior managers for each case. This would imply that a positive relationship between occupational stress and peptic ulcer, at least in our case, has not been confirmed.

Out of the 29 managers who reported pain, 42.9% did not associate it with eating whereas 28.6% reported the appearance of pain 2 to 3 hours after eating. Of these, a significant majority (40.7%) reported relief in pain by taking bicarbonate of soda and only 14.8% reported relief in pain by drinking milk. 31.0% of the managers (out of a total of 29) reported pain for less than 2 days in the last month and 34.5% reported pain for 2 to 5 days in the last month. Approximately 10% of the managers reported pain for more than 20 days in the last month.

Table 53 summarizes the occurrence of depression, common cold, and headache for the entire population as well as for both the sizes of the firms and the levels of management.

TABLE 53

OCCURANCE OF DEPRESSION COMMON COLD AND HEADACHE

Items	Large Size		Medium Size		Total
	Senior	Intermediate	Senior	Intermediate	
1. Depression					
-Never	10(37.0%)	10(35.7%)	6(22.2%)	11(40.7%)	37(33.9%)
-Occasion- ally	17(63.0)	17(60.7)	21(77.8)	15(55.6)	70(64.2)
-Quite often	0(0.0)	1(3.6)	0(0.0)	1(3.7)	2(1.8)
Totals	27(49.1)	28(50.9)	27(50.0)	27(50.0)	109*(100.0)
2. Common Cold					
-Never	1(3.6)	2(6.9)	4(14.8)	8(28.6)	15(13.4)
-Occasion- ally	27(96.4)	27(93.1)	23(85.2)	20(71.4)	97(86.6)
-Quite often	0(0.0)	0(0.0)	0(0.0)	0(0.0)	0(0.0)
Totals	28(49.1)	29(50.9)	27(49.1)	28(50.9)	114*(100.0)
3. Headache					
-Never	7(25.0)	8(29.6)	7(25.9)	8(28.6)	30(27.3)
-Occasion- ally	20(71.4)	16(59.3)	16(59.3)	19(67.9)	71(64.5)
-Quite often	1(3.6)	3(11.1)	4(14.8)	1(3.6)	9(8.2)
Totals	28(50.9)	27(49.1)	27(49.1)	28(50.9)	110*(100.0)

*Out of a total of 116 respondents

As shown in Table 53, a vast majority of Manitoba managers suffer from occasional occurrences of depression (64.2%), common cold (86.6%) and headache (64.5%). Some very interesting comments can be made.

1. Senior managers in medium size firms, reported a higher occurrence of depression as compared to their counterparts in the large size firms. The reverse is true for intermediate level managers.

2. Senior and intermediate managers of the large size firms, reported a higher occurrence of common cold as compared to their respective counterparts in the medium size firms.
3. Senior managers in large size firms, reported a higher occurrence of headache as compared to their counterparts in the medium size firms. The reverse is true for intermediate level managers.

In this chapter the data analyzed relates to a review of contemporary occupational values, measures of occupational stress and general health. Some major conclusions are given below:

1. In occupational values there is a trend for higher ranking of values such as challenge in work, independence, opportunities for growth and achievement, and low ranking of values such as security, good relations with co-workers, good supervision, status, etc.
2. Intermediate level managers, have a significantly higher mean-stress score as compared to the senior level managers.
3. Managers with an urban background have a significantly higher mean-stress score as compared to managers from a rural background.
4. The size of the firm, age and level of education of a manager do not significantly affect the manager's mean-stress score.

This completes the analysis of the results of the present study. The summary conclusions, policy implications and suggestions for future research are given in the next chapter.

CHAPTER IX
SUMMARY CONCLUSIONS, POLICY IMPLICATIONS
AND SUGGESTIONS FOR FUTURE RESEARCH

CHAPTER IX

SUMMARY CONCLUSIONS, POLICY IMPLICATIONS
AND SUGGESTIONS FOR FUTURE RESEARCH

This study is the first extensive study of its kind for the Province of Manitoba. Very few industries in Manitoba incorporated high degrees of innovation (Electronics oriented) and/or sophisticated industrial production (Steel Mills, etc.). Consequently, the generalization of the results of the study to other areas may be questionable. Perhaps the results of the study can be generalized to similar settings. In that context, the results and findings reported below may apply to the cities in the Prairie region but not necessarily to the metropolitan cities like Toronto, Montreal and Vancouver. The major findings are summarized below. Where possible they have been presented in relation to the various independent variables of the study.

1. The average industrial manager in Manitoba is about 47 years old. He is married and has over twenty years of total experience. He is generally a Canadian by birth and comes from an urban background. In terms of a formal education, he has an equal chance of having completed (a) High School (b) Some College and (c) College Degree. The average annual income of a Manitoba manager is \$25,420(1975). A significant number of them receive bonuses and have a company vehicle. Most of the managers read "The Financial Post" and "Canadian Business". Magazines of popular interest are "Time", "Newsweek" and "Reader's Digest".

A large number of them left their first job in less than 5 years, although a significant number has been with the present company for over 20 years.

2. The level of perceived need fulfillment is fairly high for Manitoba managers. The lowest level of need fulfillment exists for social needs. Senior level managers have significantly more need fulfillment of esteem and autonomy categories as compared to intermediate level managers. They also have a significantly higher perception of the core-dimension of autonomy. These findings are understandable as senior managers are at the top and are decision-makers. The level of satisfaction as measured by JDI, however, was found to be negatively correlated to a manager's level of hierarchy. This is explained in terms of senior managers being at the top and such items as promotional opportunities, and quality of supervision received, do not mean too much to them. Consequently they may have a tendency to score low on these items. This raises some questions about the use of JDI as a measure of satisfaction for top level managers. Manitoba managers, regardless of their level of management, have a comparatively high need discrepancy in the areas of self-actualization and security. These findings raise certain basic questions about Maslow's need hierarchy where need discrepancy was simultaneously reported in the categories of lower and higher order needs. Although little support for a clear cut need hierarchy exists in the literature, there is some evidence that unless the security needs are satisfied, people are not concerned with higher-order needs (Cofer and Appley, 1964; Alderfer, 1972). Our findings do not indicate a clear cut hierarchy and are in line with others (Ivancevich, 1969; Slocum, Topichuk and Kuhn 1971). Because the managers studied, generally, are older, have low education and have been with the company for more

than 20 years, security seems to mean a great deal to them. Their mobility is also limited because of the nature of the Prairie economy.

Only a small number of Manitoba managers reported occurrences of peptic ulcer. Because of the small sample size, statistical tests were not performed. In the area of occupational stress, however, the response rate was very good. The intermediate managers reported a significantly higher occupational stress. It seems that the higher stress may be due to their unsatisfied mobility aspirations and role conflict.

3. The size of the firm did not make a significant difference on a manager's perception of need fulfillment, levels of satisfaction (JDI) and occupational stress. Managers in medium size firms, however, scored significantly high on their perception of the core-dimensions of autonomy and task identity. It could be that because of a smaller firm size, managers have a greater say in scheduling their work and can identify the results of their efforts more clearly.

The data on the size of the firms, however, suggests that large size firms tend to provide greater satisfaction, particularly for security needs. Most dissatisfied managers in terms of perceived need discrepancy, are those working in a medium size firm at an intermediate level.

4. Managers from a rural background appear generally to have more need fulfillment as compared to managers from an urban background. However, the latter managers have higher expectations and desire more higher-order need satisfaction as compared to the former. A manager's early life does not significantly affect his perception about core-dimensions

or levels of satisfaction (JDI).

Managers from an urban background have a significantly higher stress as compared to those from a rural background. This could be attributed to the anxiety created on account of their unfulfilled need expectations.

5. Age does not make a significant difference in a manager's perception of need discrepancy, core-dimensions, or occupational stress.
6. Managers having higher levels of education are generally more dissatisfied in the higher order need categories. The level of education however, does not significantly influence a manager's perception about the level of satisfaction (JDI) and the level of occupational stress.
7. The data are suggestive in the area of managerial specialization. Managers in the field of Finance and Accounting have the highest level of perceived need discrepancy for most need categories. These managers scored highest on the core-dimensions of task identity and have the highest occupational stress. The findings are explained in light of the nature of their work, their being 'loners', having high unfulfilled expectations and thereby high anxiety and concern.
8. The measure of job-design adopted in the study for job-characteristics appears very promising. The study has indicated that a manager's perception about job-design is not significantly influenced by his level of management, age, education or early life. The results of the factor analysis indicate that the measure of job-design is related to the fulfillment of higher-order needs.
9. The four specific satisfaction items most strongly related to a job's four core-dimensions (variety and challenge, autonomy, task identity

and feedback) are (in descending order) (a) participation in job-related decisions (b) feelings of worthwhile accomplishment (c) opportunity for independent thought and action (4) the amount of respect and fair treatment from the boss.

10. The role of desired higher-order need strength, as a moderator of a manager's perception of core-dimensions and job characteristics, appears to be very complex.
11. The results of the factor analysis indicate that Porter-type items can be used to differentiate between higher and lower order need categories.

POLICY IMPLICATIONS AND SUGGESTIONS FOR FUTURE RESEARCH

The present study was undertaken to assess and analyze certain aspects of managerial motivation in the private sector industries in the Province of Manitoba. The objective of the study was to concentrate on three specific areas (a) Need Fulfillment and Motivation (b) Job-characteristics and Motivation and (c) Occupational Stress and Manager's General Health.

The major findings of the study have been summarized in the previous section. The results have some policy implications. They are largely aimed at increasing the success of the individual-organization interaction and therefore should contribute to overall productivity. The focus of the study was on senior and intermediate level managers and consequently the usefulness of the findings are mainly directed to the owners, Board of Directors or Corporate Head Offices of the organizations studied. The results of the study could be useful to the Government to the extent that they can influence the business environment in the

Province. Last but not the least, the managers studied would find the results useful as it will increase their general awareness.

Some of the findings which have policy implications are presented below with respect to the three specific areas studied.

NEED FULFILLMENT AND MOTIVATION

A very surprising finding was the Manitoba managers, and particularly the middle managers, paramount concern for security. In this respect, they came very close to Maslow's (1965) class of people fixated at the safety-need level.

It appears as if these managers have reached the arrival stage (Jennings, 1967) and are staying at a plateau in their career. They are generally older, have 20 years of service and may have a restricted mobility because of the Prairie economy. Mobility is highly related to growth. The industries in the Province are not undergoing spectacular growth patterns and thus options for promotion within the firm, and chances outside in other firms, are restricted. A major policy implication would thus be an evaluation or incorporation of ways and means to reduce this anxiety. Perhaps, if the perceived need dissatisfaction with security need decreases, managerial motivation may increase. This suggests an area of future research aimed at an attempt to reduce security need discrepancy. This could among other things, include a review of existing methods for (a) recruitment, selection and training and (b) compensation, pension and retirement.

JOB CHARACTERISTICS AND MOTIVATION

Job characteristics were studied utilizing the concept of core-dimensions, job-design and JDI.

In proposition no. 5, dealing with the core-dimensions, (Chapter VI), it was implied that those characteristics of a job which showed a strong positive relationship to the core-dimensions could be utilized to increase managerial motivation. In the Manitoba study, it has been found that the following four characteristics are strongly related to core-dimensions .

- a. Participation in job-related decisions.
- b. Feeling of worthwhile accomplishments
- c. Opportunity for independent thought and action
- d. Respect and fair treatment from the boss.

A major policy implication would thus be a review of the existing organizational setting to see how these four items can be incorporated into the job. This will increase a manager's satisfaction and thus his intrinsic motivation. However, these changes would have to be done within the industrial character of the Province. There were very few industries which incorporated high degrees of innovation and/or sophisticated industrial production (Table 2). Consequently before any or all of the above four characteristics can be successfully incorporated into a manager's job, future research would be necessary to establish their applicability.

OCCUPATIONAL STRESS AND GENERAL HEALTH

Questions on occupational stress and general health were included in the study because of the implication that job dissatisfaction contributes significantly to illness. The results of the study have basically confirmed this implication. The managers who have a relatively high need discrepancy also generally reported higher occupational stress. Apparently they are working in anxiety and tension.

The implication for policy, based on the results of the study in this area, are not very direct. An implicit assumption can, however, be made that conditions at work, which increase managerial motivation either

in terms of decreased need discrepancy or in terms of increased satisfaction from job characteristics, should result in better employee health. This suggests that future research on work motivation should also study worker's health at the same time. It was realized, in the present study, when the analysis was half-way through, that the questionnaire on general health and occupational stress needed some improvements. It is suggested that the questionnaire for general health be given an extensive review and additional questions on 'blood-pressure' and 'heart-disease' etc. be included in future studies.

The above briefly summarizes the major policy implications and includes some comments about possible areas of future research. The study might also stimulate research in additional related areas. It would be of interest and more meaningful to see how the results of the present study compare with managers from the public sector i.e. crown corporations and the civil service in the Province. The scope of the study could then be enlarged to cover other industrial economies nationally as well as internationally.

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APPENDIX A
QUESTIONNAIRE

PART I

1. _____ P

2-3. _____ L

4-6. _____ N

Please check the appropriate answers:

1. Sex:

- Male
- Female

7

2. Age:

- 20 - 29
- 30 - 39
- 40 - 49
- 50 - 59
- 60 or more

8

3. Current marital status:

- Single
- Married
- Widowed
- Separated/Divorced

9

4. Highest level of formal education completed:

	SELF	FATHER	MOTHER	WIFE/ HUSBAND
High School education not completed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
High School graduate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Some college	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
College graduate (e.g. B.E., B.A., B.Sc., B. Com., LL.B.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Graduate degree (e.g. M.A., M.Sc., M.B.A., Ph.D.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

10 11 12 13

5. Professional non-University designations

- C.A.
- R.I.A.
- P. Eng.
- Others: Specify _____

14
 15
 16
 17

6. Father's occupational background

	FATHER	GRANDFATHER
Farmer	<input type="checkbox"/>	<input type="checkbox"/>
Self-employed	<input type="checkbox"/>	<input type="checkbox"/>
Employee	<input type="checkbox"/>	<input type="checkbox"/>

18 19

7. Approximate number of years of total work experience including the present:

- Less than 2 years
- 2 - 5 years
- 6 - 10 years
- 11 - 15 years
- 16 - 20 years
- More than 20 years

20

8. Approximately how long did you stay in your first job before moving on to another job:

- Less than 2 years
- 2 - 5 years
- 6 - 10 years
- 11 - 15 years
- 16 - 20 years
- More than 20 years

21

9. Approximate number of work experience with present employer:

- Less than 2 years
- 2 - 5 years
- 6 - 10 years
- 11 - 15 years
- 16 - 20 years
- More than 20 years

22

10. Approximately how many years of your work career has it taken for you to reach your present position:

- Less than 2 years
- 2 - 5 years
- 6 - 10 years
- 11 - 15 years
- 16 - 20 years
- More than 20 years

23

11. Last year's income from work:

- Less than \$6,000
- \$6,000 - \$9,999
- \$10,000 - \$14,999
- \$15,000 - \$24,999
- \$25,000 - \$49,999
- \$50,000 and above

24

12. Please indicate the fringe benefits which you receive:

	YES	NO		
Bonus	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	25
Specific location allowances	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	26
Reimbursement of special kinds of expenses; medical others _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	27
Company vehicle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	28
Company accommodation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	29
Others _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	30
			<input type="checkbox"/>	31

13. Please indicate the area/areas of professional specialization in relation to work:

	YES	NO		
Engineering	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	32
Law	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	33
Business Administration	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	34
Public Administration	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	35
Accounting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	36
Others: Specify _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	37

14. Indicate the number of professional societies or associations to which you belong:

- None
- 0 - 2
- 3 - 5
- Over 5

Please specify: _____

15. Please indicate the type of business which is dominant in the organization you work for most of the time, as an employee or as an owner-manager:

Goods-producing industries (excluding agriculture):

- Forestry, fishing and trapping
- Mines, quarries and oil wells
- Manufacturing
- Durables (auto, large appliances, etc.)
- Non-durables
- Construction

Service industries:

- Transportation, communication and other utilities
- Trade
- Finance, insurance and real estate
- Community, business and personal service
- Public Administration (Civil Service)
- Others: Specify _____

16. The organization for which you work for most of the time is in the:

- Public sector (i.e. government and Crown Corp.)
- Private sector

41

17. Please indicate the major function of your present job:

Senior or Divisional Level of Management:

- Assistant Deputy Minister
- Chairman/President
- General Manager
- Director/Vice-President/Chief Engineer
- Controller/Comptroller
- Others: Specify: _____

42 43

Intermediate or Departmental Level of Management:

- Project Managers
- Plant Managers
- Superintendent
- Departmental Head/Director
- Administrator
- Sales Managers/Purchasing Managers
- Ass't. Project Managers
- Others: Specify _____

Junior or Section Level of Management:

- Senior Research Engineers/Consultants
- Economists/Designers
- Supervisors
- Section Managers
- Project Engineers
- Administrative Manager/
- Others: Specify: _____

18. Indicate the number of people you supervise:

- Up to 10
- 11 - 20
- 21 - 30
- 31 - 50
- 51 - 100
- upwards of 100

44

19a. If you are employed in a business or industry sector, please indicate your annual sales volume:

45

- Up to 1 million dollars
- Over 1 million - up to 2 million dollars
- Over 2 million - up to 5 million dollars
- Over 5 million - up to 10 million dollars
- Upwards of 10 million dollars

19b. If you are not working in an industry or if 19a. is not applicable, please indicate the amount of annual budget allocated to you or handled by you:

46

- Up to 50,000 dollars
- Over 50,000 - up to 200,000 dollars
- Over 200,000 - up to 500,000 dollars
- Over 500,000 - up to 1 million dollars
- Over 1 million - 2 million dollars
- Over 2 million - 5 million dollars
- Over 5 million dollars

20. How were you recruited to the present position:

47

- Promotion from within (the same department)
- Selected from inside (the whole organization)
- Selected from outside

21. Indicate the journals of technical, professional or general interest which you read: (Maximum of 2 in each group).

48 49

	1ST	2ND
	CHOICE	CHOICE

i) Technical and Professional

- | | | |
|---------------------------|--------------------------|--------------------------|
| Harvard Business Review | <input type="checkbox"/> | <input type="checkbox"/> |
| Personnel Journal | <input type="checkbox"/> | <input type="checkbox"/> |
| Financial Post | <input type="checkbox"/> | <input type="checkbox"/> |
| Financial Times of Canada | <input type="checkbox"/> | <input type="checkbox"/> |
| Canadian Business | <input type="checkbox"/> | <input type="checkbox"/> |
| Others: Specify _____ | <input type="checkbox"/> | <input type="checkbox"/> |

ii) General Interest

50 51

- | | | |
|-----------------------|--------------------------|--------------------------|
| McLeans | <input type="checkbox"/> | <input type="checkbox"/> |
| Time | <input type="checkbox"/> | <input type="checkbox"/> |
| Reader's Digest | <input type="checkbox"/> | <input type="checkbox"/> |
| Newsweek | <input type="checkbox"/> | <input type="checkbox"/> |
| Popular Mechanics | <input type="checkbox"/> | <input type="checkbox"/> |
| Others: Specify _____ | <input type="checkbox"/> | <input type="checkbox"/> |

22. Indicate your main hobbies: (Maximum of 4)

	1ST CHOICE	2ND CHOICE	3RD CHOICE	4TH CHOICE
Fishing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Golf	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Curling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hockey	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Water Skiing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Others: Specify _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------	--------------------------

52 53 54 55

23. Religion:

Protestant
 Catholic
 Jewish
 Others: Specify _____

56

24. Indicate the language spoken predominantly in your home for interpersonal communications in the family

	ALMOST ALWAYS	QUITE OFTEN	OCCASIONALLY	NEVER
English	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
French	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ukranian	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
German	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Italian	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spanish	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Portugese	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Others: Specify _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<input type="checkbox"/>	57
<input type="checkbox"/>	58
<input type="checkbox"/>	59
<input type="checkbox"/>	60
<input type="checkbox"/>	61
<input type="checkbox"/>	62
<input type="checkbox"/>	63
<input type="checkbox"/>	64

25. How many years have you been residing in Canada:

Since birth
 Born outside but more than 20 years
 16 - 20 years
 11 - 15 years
 6 - 10 years
 2 - 5 years
 Less than 2 years

65

26. Indicate the region of your birth or origin:

66 67

- Canada
- United Kingdom (England, Scotland, Wales, N. Ireland)
- Ireland
- Western & Southern Europe
- Central & Eastern Europe
- U.S.A.
- Latin American
- Oceania (Australia, New Zealand)
- Asia
- Africa

27. Specify the country of origin:

Name of the country _____

28. Where did you spend most of your early life (up to 12 years):

68

- Rural (farm)
- Urban (towns and big cities)

PART II

Below are given five scales to describe the characteristics of your job in terms of work, supervision, pay, promotion and co-workers. Please mark a Y (yes) beside an item if the item describes the particular aspect of your job, N (no) if the item did not describe that aspect, or ? (question mark) if you could not decide.

e.g.

- Fascinating = Yes, work is fascinating.
- Routine = No, work is not routine.
- ? Satisfying = There is a question mark whether the work is satisfying or not.

Work

- | | | | |
|--------------------------|-------------------------------|--------------------------|----|
| <input type="checkbox"/> | Frustrating | <input type="checkbox"/> | 7 |
| <input type="checkbox"/> | Fascinating | <input type="checkbox"/> | 8 |
| <input type="checkbox"/> | Routine | <input type="checkbox"/> | 9 |
| <input type="checkbox"/> | Satisfying | <input type="checkbox"/> | 10 |
| <input type="checkbox"/> | Boring | <input type="checkbox"/> | 11 |
| <input type="checkbox"/> | Good | <input type="checkbox"/> | 12 |
| <input type="checkbox"/> | Creative | <input type="checkbox"/> | 13 |
| <input type="checkbox"/> | Respected | <input type="checkbox"/> | 14 |
| <input type="checkbox"/> | Hot | <input type="checkbox"/> | 15 |
| <input type="checkbox"/> | Pleasant | <input type="checkbox"/> | 16 |
| <input type="checkbox"/> | Useful | <input type="checkbox"/> | 17 |
| <input type="checkbox"/> | Tiresome | <input type="checkbox"/> | 18 |
| <input type="checkbox"/> | Healthful | <input type="checkbox"/> | 19 |
| <input type="checkbox"/> | Challenging | <input type="checkbox"/> | 20 |
| <input type="checkbox"/> | On your feet | <input type="checkbox"/> | 21 |
| <input type="checkbox"/> | Simple | <input type="checkbox"/> | 22 |
| <input type="checkbox"/> | Endless | <input type="checkbox"/> | 23 |
| <input type="checkbox"/> | Gives sense of accomplishment | <input type="checkbox"/> | 24 |

Pay

- | | | | |
|--------------------------|-------------------------------------|--------------------------|----|
| <input type="checkbox"/> | Income adequate for normal expenses | <input type="checkbox"/> | 43 |
| <input type="checkbox"/> | Satisfactory profit sharing | <input type="checkbox"/> | 44 |
| <input type="checkbox"/> | Barely live on income | <input type="checkbox"/> | 45 |
| <input type="checkbox"/> | Bad | <input type="checkbox"/> | 46 |
| <input type="checkbox"/> | Income provides luxuries | <input type="checkbox"/> | 47 |
| <input type="checkbox"/> | Insecure | <input type="checkbox"/> | 48 |
| <input type="checkbox"/> | Less than I deserve | <input type="checkbox"/> | 49 |
| <input type="checkbox"/> | Highly paid | <input type="checkbox"/> | 50 |
| <input type="checkbox"/> | Underpaid | <input type="checkbox"/> | 51 |

Promotions

- | | | | |
|--------------------------|----------------------------------|--------------------------|----|
| <input type="checkbox"/> | Good opportunity for advancement | <input type="checkbox"/> | 52 |
| <input type="checkbox"/> | Opportunity somewhat limited | <input type="checkbox"/> | 53 |
| <input type="checkbox"/> | Promotion on ability | <input type="checkbox"/> | 54 |
| <input type="checkbox"/> | Dead-end job | <input type="checkbox"/> | 55 |
| <input type="checkbox"/> | Good chance for promotion | <input type="checkbox"/> | 56 |
| <input type="checkbox"/> | Unfair promotion policy | <input type="checkbox"/> | 57 |
| <input type="checkbox"/> | Infrequent promotions | <input type="checkbox"/> | 58 |
| <input type="checkbox"/> | Regular promotions | <input type="checkbox"/> | 59 |
| <input type="checkbox"/> | Fairly good chance for promotion | <input type="checkbox"/> | 60 |

Supervision

- | | | | |
|--------------------------|--------------------------|--------------------------|----|
| <input type="checkbox"/> | Asks my advice | <input type="checkbox"/> | 25 |
| <input type="checkbox"/> | Hard to please | <input type="checkbox"/> | 26 |
| <input type="checkbox"/> | Impolite | <input type="checkbox"/> | 27 |
| <input type="checkbox"/> | Praises good work | <input type="checkbox"/> | 28 |
| <input type="checkbox"/> | Tactful | <input type="checkbox"/> | 29 |
| <input type="checkbox"/> | Influential | <input type="checkbox"/> | 30 |
| <input type="checkbox"/> | Up-to-date | <input type="checkbox"/> | 31 |
| <input type="checkbox"/> | Dosen't supervise enough | <input type="checkbox"/> | 32 |
| <input type="checkbox"/> | Quick tempered | <input type="checkbox"/> | 33 |
| <input type="checkbox"/> | Tells me where I stand | <input type="checkbox"/> | 34 |
| <input type="checkbox"/> | Annoying | <input type="checkbox"/> | 35 |
| <input type="checkbox"/> | Stubborn | <input type="checkbox"/> | 36 |
| <input type="checkbox"/> | Knows job well | <input type="checkbox"/> | 37 |
| <input type="checkbox"/> | Bad | <input type="checkbox"/> | 38 |
| <input type="checkbox"/> | Intelligent | <input type="checkbox"/> | 39 |
| <input type="checkbox"/> | Leaves me on my own | <input type="checkbox"/> | 40 |
| <input type="checkbox"/> | Lazy | <input type="checkbox"/> | 41 |
| <input type="checkbox"/> | Around when needed | <input type="checkbox"/> | 42 |

Co-Workers

- | | | | |
|--------------------------|----------------------|--------------------------|----|
| <input type="checkbox"/> | Stimulating | <input type="checkbox"/> | 61 |
| <input type="checkbox"/> | Boring | <input type="checkbox"/> | 62 |
| <input type="checkbox"/> | Slow | <input type="checkbox"/> | 63 |
| <input type="checkbox"/> | Ambitious | <input type="checkbox"/> | 64 |
| <input type="checkbox"/> | Stupid | <input type="checkbox"/> | 65 |
| <input type="checkbox"/> | Responsible | <input type="checkbox"/> | 66 |
| <input type="checkbox"/> | Fast | <input type="checkbox"/> | 67 |
| <input type="checkbox"/> | Intelligent | <input type="checkbox"/> | 68 |
| <input type="checkbox"/> | Easy to make enemies | <input type="checkbox"/> | 69 |
| <input type="checkbox"/> | Talk too much | <input type="checkbox"/> | 70 |
| <input type="checkbox"/> | Smart | <input type="checkbox"/> | 71 |
| <input type="checkbox"/> | Lazy | <input type="checkbox"/> | 72 |
| <input type="checkbox"/> | Unpleasant | <input type="checkbox"/> | 73 |
| <input type="checkbox"/> | No privacy | <input type="checkbox"/> | 74 |
| <input type="checkbox"/> | Active | <input type="checkbox"/> | 75 |
| <input type="checkbox"/> | Narrow interests | <input type="checkbox"/> | 76 |
| <input type="checkbox"/> | Loyal | <input type="checkbox"/> | 77 |
| <input type="checkbox"/> | Hard to meet | <input type="checkbox"/> | 78 |

- | | (Min.) | (Max.) | |
|----------------------------------------------------------------------------------------------------------|--------------------------|--------------------------|--------------------------|
| 20. The opportunity, in my job, for participation in the determination of methods, procedures and goals. | | | |
| a) How much is there now? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) How much should there be? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c) How important is this to me? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

64
65
66

PART IV

The questions in part IV are grouped into three separate headings. Part IV (a) deals with the occupational values of managers and is designed to get their rating of certain job characteristics. Part IV (b) has questions which are designed to assess work-stress associated with your job and Part IV (c) deals with questions of general health.

Part IV (a) - OCCUPATIONAL VALUES

1. Imagine you have an ideal occupation. Rank the following job characteristics in order of their importance to you in an ideal occupation. The job characteristics are not arranged in any particular order of importance.

- Challenge in work
- Good relations with co-workers
- Good salary
- Good supervision
- Independence
- Opportunity for achievement
- Opportunity for personal growth
- Security
- Status
- Others: Specify _____

7	8
9	10
11	12
13	14
15	16
17	18
19	20
21	22
23	24
25	26

Part IV (b) - ORGANIZATIONAL STRESS

All of us occasionally feel bothered by certain kinds of things in our work. Following is a list of certain things that sometimes bother people. Please indicate how frequently you feel concerned by each of them. As you will notice, each question can be scored on a five point scale. The answers can be one of the following:

- 1 Never
- 2 Rarely
- 3 Sometimes
- 4 Rather often
- 5 Nearly all the time

PART IV (c) - GENERAL HEALTH

This part has been designed to study the stressful work situations and its relationship to your general health.

15. During the last thirty days, did you have any pains in your stomach?

- Yes
- No (If no, go to Question No. 17)

41

16. If yes, then answer the following questions:

(i) Did these pains come on before eating, while eating, right after eating, a couple of hours after eating, or when?

- Before eating
- While eating
- Right after eating
- Two or three hours after eating
- Not associated with eating

42

(ii) Was this pain relieved by eating, drinking milk, bi-carbonate of soda or other antacid, or by anything else?

- Eating
- Drinking milk
- Bi-carbonate of soda or other antacid
- Anything else
- Nothing

43

(iii) Did the stomach pain wake you up or keep you up at night?

- Yes
- No

44

(iv) Thinking still about this part for four weeks, on how many days would you think you had this pain for at least part of the day?

- Less than 2
- 2 - 5 days
- 6 - 10 days
- 11 - 15 days
- 16 - 20 days
- More than 20 days

45

17. How often do you suffer from:

	NEVER	OCCASIONALLY	QUITE OFTEN
Depression	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Common Cold	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Headache	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

46

47

48

THANK YOU FOR YOUR CO-OPERATION!