ABSTRACT

The purpose of this study was to investigate the job attitudes relative to job satisfaction and job dissatisfaction of educators in Rehabilitation Medicine in Canadian universities. Specifically, it was designed to identify the job facets and job aspects which contributed to job satisfaction and dissatisfaction of Physical and Occupational Therapy educators. Furthermore, the study explored the extent to which Herzberg's two-factor theory of job satisfaction was applicable to this professional group, and the extent to which different levels of overall job satisfaction were associated with different personal, organizational, professional, and mobility characteristics of this group.

Based upon a review of the literature on job satisfaction, a three-part questionnaire was developed. The population for this study consisted of 118 full-time academic faculty members employed during the 1979/80 academic year in 11 Canadian universities which offer programs in Physical and Occupational Therapy. The sample for the study consisted of 94 educators who returned usable questionnaires.

Data were collected on the personal, organizational, professional and mobility characteristics of the respondents, the importance and level of satisfaction associated with each job facet and critical incidents which contributed to feelings of satisfaction and dissatisfaction respectively, with their jobs. The data were subjected to appropriate statistical analyses. F test was used to test for significant differences in the mean levels of job satisfaction among the educators classified by selected demographic characteristics. The major findings and conclusions

THE UNIVERSITY OF ALBERTA

FACULTY OF GRADUATE STUDIES AND RESEARCH

The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research, for acceptance, a thesis entitled JOB SATISFACTION OF EDUCATORS IN REHABILITATION MEDICINE IN CANADA submitted by ALPHONSO RUBEN ANYAGWAOCHU ONUOHA in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Educational Administration.

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JOB SATISFACTION OF EDUCATORS IN REHABILITATION MEDICINE IN CANADA

by

ALPHONSO RUBEN ANYAGWAOCHU ONUOHA

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE

OF DOCTOR OF PHILOSOPHY

DEPARTMENT OF EDUCATIONAL ADMINISTRATION

EDMONTON, ALBERTA

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were:

In general, the respondents reported moderate overall satisfaction with their jobs. Intrinsic job facets were not only more important but also contributed more to overall job satisfaction than did extrinsic job facets. The importance of the job facets was reflected in the satisfaction ratings and therefore the use of importance ratings did not improve the estimate of overall job satisfaction.

When the respondents were satisfied with their jobs, they narrated critical incidents relating to recognition, achievement, varied and challenging content of work, and good interpersonal relationships with students. When they were dissatisfied with their jobs, they narrated critical incidents relating to unfavourable working conditions, unfavourable policies and administration of the university, poor interpersonal relationships with their peers and being accorded inadequate responsibility.

A series of analyses of variance were carried out to determine if significant differences existed in the level of job satisfaction of the respondents based on selected demographic variables. Significant differences in the level of overall job satisfaction existed among the respondents grouped according to their level of education, salary scales and years in present employment. Secondary analyses indicated that Benefits, Altruism, Working Conditions, Environmental Support and Work Ethos were the factors which accounted for some of the differences in the level of overall job satisfaction of the respondents grouped by selected demographic characteristics.

No differences in the level of overall job satisfaction existed between the mobile and non-mobile respondents. The major reasons for

mobility were "opportunity for research," "opportunity for further professional education," and the need for "adequate recognition."

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Chapter I

INTRODUCTION AND PROBLEM

Introduction

The concept of job satisfaction has been of great interest to social scientists whose major concern was on problems related to work in industry. Some social scientists have been interested in the study of job satisfaction because they assume that work enables a person to satisfy one's needs and adds to the dignity of the individual as a person and therefore, ought to be valued positively. On the other hand, Smith, Kendall and Hulin (1969:3) believe that "the improvement of satisfaction is of humanitarian value. . . satisfaction is a legitimate goal in itself."

Other researchers have embarked on the study of job satisfaction because research evidence suggests a link between the level of job satisfaction and the quality of life within the work environment. Lawler (1973) sees job satisfaction as "one measure of the quality of life in organizations." Despite the different concerns, the common focus of these approaches is the essence of the work and the desirability of positive affective feelings which people experience in the course of their employment.

A variety of personal factors including age, sex, educational background (Herman and Hulin, 1972) and experience (Wild and Dawson, 1976) have some effect on the "affective feelings" which people experience in the course of their employment. In addition, individual needs

tend to vary during a person's life cycle such that the needs at the prime of life are likely to be different from the needs of the same person, and for that matter other persons, close to retirement. Kalleberg (1977:125) maintains that such individual differences arise not only because people evaluate job characteristics differently, but also from differences in what people seek to obtain from their work. The individual's needs affect the person's job attitudes. Among professional people the variation in these needs is even more manifest due to their different levels of education and their differing levels of desire for achievement. One such professional group is the educators in Rehabilitation Medicine in Canada, specifically Physical and Occupational Therapy educators.

As recently as five years ago, it was not necessary for a therapist to hold a university degree in order to obtain a position as an educator in Rehabilitation Medicine in Canada. All that was necessary was that the individual should have a teaching diploma and be registered with a professional association either the Canadian Physiotherapy Association or the Canadian Association of Occupational Therapy. The teaching diploma programs in physical and occupational therapy no longer exist in Canada. The last Canadian graduates of the teaching diploma programs graduated in 1974 from the Division of Occupational Therapy at The University of Alberta, and in 1975 from the School of Physical and Occupational Therapy at the University of Toronto. Presently, most academic teaching positions in the Rehabilitation Medicine programs offered in universities in Canada are filled by therapists who hold a Master's degree, often in disciplines other than Rehabilitation Medicine. Recent advertisements placed in the professional journals

for teaching positions in Rehabilitation Medicine have requested that applicants have a doctorate.

In any case, the beginning educators in Rehabilitation Medicine are often employed at the lowest academic rank and normally must wait for a number of years to be gradually promoted to the next higher academic rank. Whereas therapists who have a teaching diploma have a limited economic market outside of the Schools of Rehabilitation Medicine, the younger generation of therapists who have advanced degrees are in a more competitive market. These individuals can pick and choose among careers and roles. There is evidence of an increasing number of therapists in graduate programs who will eventually be in the different academic positions in Rehabilitation Medicine. Demerath, Stephens and Taylor (1967:190) maintain that specializations within the university produce material differences in values, beliefs and attitudes. Vollmer and Kinney (1955) and Klein and Maher (1968) reported that educational level influences employees' job attitudes and expectations, such that higher education leads to higher individual expectations. At the same time there are a number of reports in the literature on sex differences (Hollon and Gemmill, 1976; Weaver, 1974; Shapiro and Wahba, 1973) which show that women professionals experience a lower level of job satisfaction than men.

Many of these findings on education and sex differences do not relate to professional employees who teach in institutions of higher learning. As a matter of fact only minimal attention has been devoted to how men and women professional employees in the university sector differ from each other in their job attitudes. Rossi and Calderwood (1974) show that the major focus of comparison among professionals in

a university setting is on such variables as rank, tenure, salary and number of publications. It is frequently asserted that males have greater need for achievement and are generally more achievement oriented than women (Maccoby and Jacklin, 1974). Similarly, the possible inequality in treatment between men and women academics continues to be a topic of lengthy discussions (Tansig, 1979:2-3).

To date, no research has been conducted that focused specifically on the job attitudes of male and female university educators in a "traditionally female" profession as Rehabilitation Medicine in Canada. Since King (1970) recommended that employees of single occupational groups should be the focus of future studies on job satisfaction, an exploratory study to understand the job attitudes related to job satisfaction and dissatisfaction of men and women educators in Rehabilitation Medicine in Canadian universities seems appropriate. The focus of this study was to determine the level of satisfaction experienced by male and female Physical and Occupational Therapy educators in the two "traditionally female" professional programs in Rehabilitation Medicine in Canadian universities.

THE PURPOSE OF THE STUDY

The purpose of this study was

(1) To determine the job attitudes related to job satisfaction of educators in Rehabilitation Medicine in universities in Canada.

(2) To identify which job facets contributed significantly to the educators' feeling of overall satisfaction.

(3) To identify the job facets which the educators considered

more important to their satisfaction with their job.

(4) To determine the relationship between the job facet importance and the overall job satisfaction.

(5) To determine if the factors which contribute to job satisfaction are different from those which contribute to job dissatisfaction.

(6) The study also attempted to test for differences in job satisfaction between various sub-groups of educators in Rehabilitation Medicine in Canadian universities formed on the basis of their identified personal, organizational, professional and mobility characteristics.

DELIMITATIONS, ASSUMPTIONS AND LIMITATIONS

Delimitations of the Study

This study was delimited to those educators in Rehabilitation Medicine who were registered therapists and were employed in a full time academic position in a Canadian university in a department of Physical and/or Occupational Therapy. The study therefore, excluded other educators in Rehabilitation Medicine who had no clinical background training, those educators who were in part-time positions and other educators in Physical and Occupational Therapy programs which were not situated in a university. Also excluded from the study were educators who met the inclusion criteria but were on either study leave or on a sabbatical leave.

The findings of this study are limited to the population of concern in Canada.

Assumptions

For the purpose of this study, the following assumptions were

made:

(1) The responses provided in the questionnaire were accurate statements of the subject's perception of the situation.

(2) The subjects answered fully and honestly.

(3) In reporting the critical incidents, the subjects could successfully locate their own feelings about their job on a continuum and choose the extremes of the continuum on their reports.

(4) That the importance of each job facet to the educator was a meaningful dimension.

Limitations of the Study

The delimitations and assumptions made for this study imposed certain limitations to it. The population included only those educators who were employed in Physical and Occupational Therapy programs in 11 Canadian universities in the 1979/80 academic year and who were in attendance in September and October 1979. Therefore, no generalization can be made to other employees nor to other departments within the same universities.

A forced choice instrument such as the questionnaire employed has the limitation that perhaps not enough choices may have been included to exhaust the entire range of possible responses. Above all, this study deals with job attitudes, and attitudes are subject to change over a period of time.

RESEARCH QUESTIONS

In order to achieve the purpose of this study, the following research questions were formulated.

1. Overall Job Satisfaction

.1 To what extent do educators in Rehabilitation Medicine in Canada currently experience overall job satisfaction?

.2 What job facets are identified as contributing significantly to the feeling of overall job satisfaction?

.3 Which job facets are identified as most important to the feeling of overall job satisfaction?

.4 What is the relationship between overall job satisfaction and the importance of the job facets?

.5 What is the relationship between job facet importance and job facet satisfaction for this group of educators?

.6 Are the satisfying and dissatisfying facets consistent with the motivator-hygiene theory of job satisfaction described by Herzberg et al. (1959)?

2. Job Aspect Satisfaction and Dissatisfaction

.1 What critical incidents were identified by educators in Rehabilitation Medicine in Canadian universities as the sources of satisfaction and dissatisfaction?

.2 Is there any consistency between these incidents and the motivator-hygiene dichotomy of Herzberg et al. (1959), that is, are similar factors identified?

3. Overall Job Satisfaction and Demographic Variables

.1 To what extent are there differences in overall job satisfaction between sub-groups of respondents formed on the bases of their personal independent variables: sex, age, academic level?

.2 To what extent are there differences in overall job satisfaction between sub-groups of respondents formed on the bases of their organizational variables: academic rank, salary level, primary involvement, years in present department?

.3 To what extent are there differences in overall job satisfaction between sub-groups of respondents formed on the bases of their professional variables: total years of experience, number of publications, number of presentations?

4. Job Satisfaction and Mobility

.1 What is the difference in the level of overall job satisfaction between mobile and non-mobile educators in Rehabilitation Medicine in Canadian universities?

.2 What job characteristics were identified by the mobiles as contributory to their decisions to move?

DEFINITION OF TERMS

For the purposes of this study the definitions of the several terms which hold specific meanings in the study were provided.

Job Attitude: In this study job attitude refers to the learned predispositions to react to the job and job components as they are perceived to be. According to Herman (1973:209), it is "measured by self reports of beliefs, feelings and/or interactions" about one's job.

Satisfaction: The definition of satisfaction and all its derivatives are based upon the definition provided by Steers. Steers (1977:41) defines satisfaction as "the degree of feeling of contentment felt by the person toward his organizational role or job."

Job Satisfaction: In this study, job satisfaction implies that feeling of contentment which is experienced by the educator in the course of, or following the performance of his/her role as an educator. Operationally it is the respondents' positive evaluation of the work situation.

Job Dissatisfaction: Job dissatisfaction is defined in this study as a negative attitude toward the job. Operationally it is the respondents' negative evaluation of the work situation.

Job Facet Satisfaction: Job facet satisfaction is operationally defined as the positive evaluation indicated by the respondents to the facets of their job identified on the questionnaire.

Job Facet Dissatisfaction: Job facet dissatisfaction is operationally defined as the respondents' negative evaluation of the given facets of their job identified on the questionnaire.

Job Facet Importance: Job facet importance is the respondents' perception of the value or essence of the given facets in the working situation. Such value will be indicated on a scale of 1-5.

Overall Job Satisfaction: Overall job satisfaction is that job satisfaction expressed by the respondent with regard to his or her feeling about the job as a whole. Operationally overall job satisfaction is viewed as a function of the job facet satisfaction/dissatisfaction (Decker, 1955), and the importance of the job facets.

Job Aspect Satisfaction: Job aspect satisfaction is satisfaction with aspects of the job identified by the educators themselves separate from the facets contained in the questionnaire.

Job Aspect Dissatisfaction: Job aspect dissatisfaction is dissatisfaction with aspects of their job which are identified by the respondents themselves separate from the facets contained in the questionnaire.

Mobility: Mobility here implies intra-professional, inter-organizational transfer, an exclusive situation in which an educator stays in the same profession but changes employer. For the purpose of this study an educator was regarded as mobile or potentially mobile if any of these conditions was applicable: (a) the educator had left a previous academic position in another university in Canada; (b) the educator indicated on the questionnaire an intention to stay in the present place of employ-

ment for this year only; (c) the educator indicated that an application had been filed for one or more advertised positions in other programs since January 1979.

Educator: An educator in this study possessed all the following characteristics: He/she was a qualified therapist, engaged in teaching, research, and/or administration, and was officially designated as "full-time faculty" by the employing university.

Rehabilitation Medicine: Some schools of Rehabilitation Medicine in Canada have departments of Occupational Therapy, Physical Therapy (Physiotherapy) and Speech Pathology and Audiology. In this study Rehabilitation Medicine implied only departments (schools) of Physical Therapy and Occupational Therapy. Physical Therapy is synonymous with Physiotherapy.

SIGNIFICANCE OF THE STUDY

Although there is considerable research on job satisfaction in general, the writer could locate only one study on job satisfaction and intra-professional mobility of educators in specific professions in institutions of higher education (Marriner and Craigie, 1977). Specifically the literature lacks research studies which have been designed to elicit the level of overall job satisfaction experienced by male and female educators in Rehabilitation Medicine in Canada. A large proportion of the studies on job satisfaction has been carried out among workers in industry and other non-educational institutions. The small proportion that has been conducted in education has focused on teachers in elementary and secondary schools (Holdaway, 1978; Wickstrom, 1973;

Sergiovanni, 1967). Some of the studies were also completed in secondary schools among principals and superintendents (Rice, 1978; Schmidt, 1976; Iannone, 1973).

If it is accepted that job satisfaction will depend upon perceived characteristics of the job in relation to an individual's frame of reference, and that different people in different walks of life place different values and importance on different aspects of their jobs, it seems that a generalization from studies in different situations may not apply to educators in institutions of higher education. In such a case, a study focusing on specific professionals in higher education such as Rehabilitation Medicine appears to be in order. Such a study would be useful not only in an era when the vocational orientation of men and women, especially in the professions, is becoming increasingly similar but even more so when done in the "traditionally female" professions such as Physical and Occupational Therapy where men and women now compete for positions on equal terms.

This study has three areas of potential significance. First, the study may assist in filling the gap in the literature regarding the job satisfaction of this group of professionals in Canada. Perhaps the findings of this study may provide the basis for comparison with future research regarding the job satisfaction of other allied health educators.

Second, the findings of this study could be useful in examining the applicability of existing theories of job satisfaction to this group of professionals in institutions of higher education. In addition, Wanous and Lawler (1972:105) indicate that theory and research are needed which map in detail the relationships among different ways of measuring satisfaction, various kinds of facet satisfaction and a

number of independent and dependent variables. Similarly, Ronan (1970: 192) pointed out that "there has been comparatively little research concerned with the relative importance of the varied components comprising job satisfaction factors." The present study was an attempt to identify and employ a wide spectrum of job facets and to take into consideration the individual differences in job facet importance - computing the overall job satisfaction rather than employing a single item measure as found in many reports. Hopefully this study may extend this line of approach to the research in, and measurement of, job satisfaction by estimating the relationship between satisfaction/dissatisfaction with and the importance of specific job facets.

Finally Dipasquale (1978), suggested that "administrators should be aware of the organizational factors contributing to the maximization or minimization of teacher job dissatisfaction and satisfaction." Creating and maintaining a favourable workplace however, requires the knowledge and understanding of how educators perceive and value their jobs and job environments, and the consequences of such perceptions. Towards this end, Katz (1978:204) points out that "job satisfaction represents an important yardstick by which researchers have tried to assess the effects of job conditions upon individuals." If administrators can attempt to minimize those aspects of the job which are identified as the greatest sources of dissatisfaction, and maximize those contributing to satisfaction, if Herzberg's two-factor theory applies, the faculty members may spend more time in positive and satisfying work. To this end this study will identify those job facets to which administrators in Rehabilitation Medicine in Canada may need to pay close attention in order to minimize dissatisfaction and maximize

satisfaction. Furthermore, job satisfaction information about academic positions may be useful for administrators in selecting particular educators for particular situations.

ORGANIZATION AND OUTLINE OF THE THESIS

The content of this chapter comprised the introduction to the background of the study, the purpose of the study, the delimitations, assumptions and limitations of the study. The chapter also contains the research questions, the definitions of terms which hold specific meaning to the study and the significance of the study.

The following is the outline of the remainder of the study.

Chapter II - This chapter contains the conceptual framework for the study on job satisfaction of educators in Rehabilitation Medicine.

Chapter III - This chapter contains the review of related literature and research on job satisfaction and mobility in general.

Chapter IV - The research design, instrumentation and methodology of the study are presented. Additionally, the pilot study, the validation process for developing the instrument and the strategy for data analysis are outlined.

Chapter V - In this chapter the analysis and evaluation of the demographic data are presented.

Chapter VI - Contains the analyses and evaluation of the data related to overall satisfaction and facet satisfaction, together with job aspect satisfaction and dissatisfaction.

Chapter VII - This chapter reports the differences in overall job satisfaction between the sub-groups of educators formed by their

personal, organizational, professional and mobility characteristics.

Chapter VIII - The summary and discussions of the findings of the study are contained in this chapter. The conclusions, implications of the findings and recommendations for further research are outlined.

A list of the references in the study is provided. The appendix contains the following: correspondence, the instrument and the data on the 31 satisfaction items.

Chapter II

CONCEPTUALIZATIONS OF JOB SATISFACTION

Job satisfaction continues to be a subject of much research. Katz and Van Maanen (1977:469-470) aptly described the conceptual problems of research in this area as follows:

> There is perhaps no area in the social sciences fraught with more ambiguity, conflicting opinions, or methodological nuances than that of work satisfaction. Yet, paradoxically, there are few areas more researched.
>
> Fundamentally, the difficulties are conceptual. Work satisfaction is treated for the most part as if it were unidimensional, somehow amenable to measurement and representation by a single number.

The difficulty is that job satisfaction has been conceptualized in several ways. The result has been a proliferation of operational definitions of job satisfaction.

One approach has been to view job satisfaction as the extent to which the work environment provides for the fulfillment of needs (Porter, 1961; Katzell, 1964; Locke, 1969:390). Smith, Kendall and Hulin (1969:6) regard job satisfaction as the "feelings or affective responses to facets of the (job) situation." These authors hypothesized that these feelings are associated with the person's perception of the difference between what is expected as a fair and reasonable return and what the person experiences in relation to the person's expectations, and in relation to the alternatives available in a given situation.

In another approach, Porter and Lawler (1969:30) view satis-

faction as a function of the equity of the reward that a person receives on the job. In this case, satisfaction is a function of the discrepancy between equitable reward and actual reward. The smaller the discrepancy the greater the satisfaction. In other words, in the discrepancy approach a large difference would be indicative of a relatively low satisfaction, which the individual would perceive as dissatisfaction.

The discrepancy approach to conceptualizing job satisfaction roughly approximates "equity theory." Equity theory is defined by Davis (1977:24) as an exchange theory which is concerned with each person's feelings of fairness about the rewards received from the organization, including social, economic and psychological rewards. The basic principle of the equity theory is that employees tend to determine equity by considering their inputs over outcomes on the job, compared to the inputs over outcomes of selected referent others. This principle is well illustrated by Porter et al. (1975:345) in their writing on intra-organizational equity. They point out that employees may feel fairly remunerated with respect to the outside world and yet feel unfairly remunerated within the organization. These authors suggest that such is the case when employees believe that there are other employees who contribute less to the organization than they do but receive similar or greater rewards. Following this line of conceptualization, Porter and Miles (1974) maintain that inputs are attributes which employees bring to the job and which are perceived as relevant for exchange (of rewards) while an outcome is the employee's receipt of the exchange. In this context, job satisfaction can be defined as a function of the employee's perceived input-outcome balance.

The common factor to all these approaches to conceptualizing

and defining job satisfaction is the concept of rewards. The major determinant of satisfaction on the job is the reward a person receives on the job. The other important factors which are inherent in the above definitions are the individual's needs, expectations, perceived equity and referent others.

In all life situations, individuals approach their jobs with different needs and aspirations. Each one has a definite notion of what he/she expects to contribute to the institution and what to expect to receive in return for the services rendered (Wernimont, 1966). To the extent that the needs are different, the educational levels are different, employment levels are different, and the other demographic variables are different, the level of expectations would be expected to be different. The level of satisfaction experienced from satisfying the needs will be different. In addition, Crozier (1964) and Karpik (1968) point out that job satisfaction cannot be viewed in isolation from the sociology of the complex institutional setting to which satisfaction reports are directed. Katz and Van Maanen (1977:483) maintain that job satisfaction is "also a function of the situational surroundings accompanying the doing of work."

Some Theories of Job Satisfaction

As already stated the common factor to most approaches to operational definitions of job satisfaction is rewards. Two theories relate closely to intrinsic and extrinsic rewards of job satisfaction. They are: Maslow's need-hierarchy theory, and Herzberg's two-factor theory.

The Need-Hierarchy Theory

Maslow (1954) maintained that there is a hierarchy of needs in the individual, arranged in five broad levels: physiological, safety, social, esteem, self-fulfillment. He held that when the lower-order needs, such as physiological and safety needs are satisfied, the higher-order needs such as esteem and self-actualization, come into operation. The reason for this as Maslow indicated was that a satisfied need does not act as a motivator.

This theory is a developmental theory and was not intended to be a theory for conceptualizing job satisfaction. Although there is no empirical evidence that there is a definite hierarchical arrangement of human needs, Maslow's theory is helpful to understand intrinsic and extrinsic satisfaction. Slocum (1971:312) provided a different approach to the need-hierarchy theory when he stated that intrinsic rewards are associated with the satisfaction of higher-order needs and therefore give rise to intrinsic satisfaction. Extrinsic rewards are often primarily associated with the satisfaction of the lower-order needs and therefore only lead to extrinsic satisfaction. The importance of Maslow's theory to this research is that it highlights the fact that different people will place different importance on different needs depending on their differing stages in personal and psychological development.

The Two-Factor Theory of Job Satisfaction

Following the analysis of their job satisfaction studies among engineers and accountants, Herzberg (1959) and his associates found that positive events were dominated by reference to intrinsic aspects

of the job such as achievement, recognition, responsibility, advancement and work itself. Conversely, negative events were dominated by reference to extrinsic aspects of the job situation, such as policy, administrative practices, working conditions, interpersonal relations and job security. Herzberg called the intrinsic variables "satisfiers" and the extrinsic variables "dissatisfiers." The satisfiers are also called motivators because their presence was shown by Herzberg (1966) to be effective in motivating the employees to greater productivity. Dissatisfiers are also called hygiene factors, because their presence serves only to prevent dissatisfaction from occurring, but does not induce employees toward "positive attitudes" (Herzberg et al., 1967:114). According to Herzberg's two-factor theory of job satisfaction, job satisfaction results primarily from intrinsic job factors, while job dissatisfaction results primarily from extrinsic job factors. Murphy (1978:485) suggests that the two-factor theory proposes a content-context dichotomy of work elements, explicitly stating that these two discrete sets of work factors have quite distinct affective correlates.

Subsequent studies to test the validity of Herzberg's two-factor theory have not provided resounding support for the theory. The major criticism of the two-factor theory is that it is method bound (Brayfield, 1960) and therefore, support for the theory comes only from studies which utilize the same open-ended critical incident approach employed by Herzberg et al. (1959). Ewen (1964) maintains that it is easier to recall incidents which relate to achievement or to promotion than incidents which resulted in lack of achievement or lack of promotion.

House and Wigdor (1967) and Dunnett, Campbell and Hakel (1967)

criticize the two-factor theory as being an over-simplification of the relationships between motivators and satisfaction, and between the sources of job satisfaction and dissatisfaction. Ewen (1964) and Rosen (1963) found that both "satisfiers and dissatisfiers" are capable of contributing to overall job satisfaction. Ewen (1964) found that dissatisfiers are capable of acting as satisfiers, while satisfiers act both as satisfiers and dissatisfiers.

Another weakness of the two-factor theory is that statements were made on overall job satisfaction without having the data relevant to overall satisfaction or dissatisfaction. The research from which the theory was formulated was not based entirely on overall satisfaction with the current job situation. It was based on critical incidents which occurred on the job. Earlier, Kahn (1961) points out that defensive behaviours and displacement could account for the findings of Herzberg and his associates. In the same vein, Vroom (1964), and Wolf (1970:90) criticize the two-factor theory explaining that ". . . people tend to remember and to attribute causes of satisfaction to themselves, and the cause of dissatisfaction to the environment." Wolf further stated that it was an error on the part of Herzberg et al., to equate "satisfaction" which is an end-state to "motivation" which is a force or drive to achieve an end-state.

Despite the above criticisms, Herzberg's two-factor theory is relevant to this study to the extent that it provides the basis for the classification scheme of the job facets into intrinsic or content and extrinsic or context categories.

The position being adopted in this study is not that one set of rewards produces satisfaction and another dissatisfaction, but that

both intrinsic and extrinsic variables can be related to both job satisfaction and dissatisfaction (Wernimont, 1966; Centers and Bugental, 1966; Ewen, 1964). It is further conceptualized that for persons whose higher level needs are prepotent, the content (intrinsic) elements will be related to increased job satisfaction. The context elements on the other hand will be strongly related to decreased satisfaction when the accustomed level of ongoing gratification is thwarted for such persons.

The Conceptual Framework for the Study

Locke (1969:330) drew attention to the fact that a job is composed of various facets:

> A job is not an entity but an abstraction referring to a combination of tasks performed by an individual in a certain physical and social environment for financial (and other) remunerations. Since a job is not perceived or experienced as such, it cannot initially be evaluated as a single unit.

In addition to this, Wanous and Lawler (1972:95) found that a single item measure of overall job satisfaction is less reliable than a composite based on a number of job items (facets). It follows, therefore, that in eliciting the varying levels of job satisfaction, as many facets of the job as possible need to be included in order to provide the subjects with the opportunity to respond to their job in its entirety.

For this study overall job satisfaction is conceptualized as a multi-faceted unitary entity representing a composite feeling about the job as a whole. Consequently it is conceptualized that the attitudes of satisfaction or dissatisfaction toward the specific facets of the job combine to produce the composite feeling referred to as overall satisfaction or dissatisfaction with the job in general. This is in keeping with Porter and Steers (1973) who have emphasized breaking down

the global concept of job satisfaction into such components as organizational, work, and personal factors. Just as people are never just happy or just sad, so also people at work are never just satisfied or just dissatisfied. People can be satisfied with some aspects of the job (job facet satisfactions) and be dissatisfied with other aspects of the job (job facet dissatisfactions). Yet, while these phenomena operate in people at work, they are still able to report an overall feeling about the job as a whole. The basic assumption, which is supported by Kalleberg (1977:126), is that people are able to balance the specific satisfactions against the specific dissatisfactions and arrive at a composite satisfaction with the job as a whole. It is that composite in this study which is referred to as overall job satisfaction. Each individual goes through a complex balancing process in order to arrive at an overall rating of satisfaction based on the feeling concerning the specific facets. In the conceptualization for this study recognition is given to the fact that there is a difference in the primacy of job facets. Some facets may be very important. Other facets may be relatively unimportant. Yet it is possible to be satisfied with the facets that are not important. In such a case the level of satisfaction may superficially be the same as that of an important facet but the magnitude or intensity of satisfaction would be expected to vary according to the importance of the job facet to the particular individual.

Viewed this way each job facet satisfaction has a magnitude whose dimensions consist of the level of satisfaction currently present and the level of importance each component of the job holds for the individual. The higher the importance of each job facet, the greater

the additive or subtractive effect the facet has on overall job satisfaction. As the resultant magnitude of the overall satisfaction increases, the force of attraction of the job for the employee increases. In other words, the greater the magnitude of overall job satisfaction, the greater will be the force on the employee to remain on the job.

The magnitude of overall job satisfaction decreases as the level of satisfaction and/or the level of importance of the facet of the job decreases. The attraction of the job to the incumbent gets weaker and weaker as the magnitude of overall satisfaction gets lower and lower until a limiting point is reached. The limiting point will vary from person to person. Close to each person's limiting point, it is conceptualized that the job incumbent will start thinking and talking about, and perhaps, searching for more congenial work elsewhere. The ultimate result will be a move from the job, subject to the availability of another more attractive job. On the other hand, where there is no other more attractive job available the incumbent undergoes a process of readjustment in order to stay in the hitherto unattractive position. Thus, the greater the overall satisfaction the greater the attraction to remain on the job, and the less the overall job satisfaction, the greater the propensity to move from the job, or to modify one's perceptions in order to stay on.

The conceptual framework provided here accounts for the individual differences that may exist in the importance placed on each job facet. It does, however, require that the various facets of the job as well as the psychological needs of the individuals on the job must be tapped by the instrument employed in the measurement of job satis-

faction.

Methods of Combining Facets of Satisfaction

A review of the literature on job satisfaction suggests that there are at least five ways of combining the measures of the different aspects of satisfaction in order to arrive at some measure of overall satisfaction. Such measures vary in elegance and complexity. Only two of the five combinations which bear some relevance to the present study will be described here. Overall satisfaction has been conceptualized as the simple summation of job-facet satisfaction (Ewen, 1967; Schaffer, 1953). In this case the researcher asks his respondents to indicate their satisfaction level with regard to each facet of the job. The total score obtained by summing the facets constitutes the overall satisfaction on the job.

On the other hand, overall satisfaction has also been conceptualized as the summation of the product of job-facet satisfaction and job facet importance (Ewen, 1967). In this case the researcher not only determines how satisfied the respondents are on the different facets of their job but also how important each facet is to them. The level of satisfaction is weighted by the importance. The overall score is obtained by summing the products. Evans (1969:100) recommends that:

> While it may be that decisions about which method to use can be based upon practical expediency. . ., it is desirable, given a value system that includes parsimony and elegance in research design, that the decision be made to use a method of combination that is congruent with the researcher's conceptual framework.

In accordance with the above recommendation, the following framework was utilized in the study:

Overall job satisfaction (JS) is a function of the sum (over the facets) of the product of job facet satisfaction (JFS) and job facet importance (JFI).

$$JS = \sum_{\text{facets}} (JFS \times JFI)$$

Summary

A linear compensatory model is being used for this study. Overall job satisfaction is conceptualized as a multidimensional entity, which exists as a composite of the satisfactions with the different facets. The following synthesis of the conceptual framework is derived:

(1) Overall job satisfaction will vary directly with the extent to which the facets of the job provide satisfaction.

(2) The more important the facet satisfaction, the more closely will job satisfaction/dissatisfaction depend on it.

(3) Both the importance of each job facet and the level of satisfaction with the facet, will vary with the demographic and organizational variables.

Chapter III

REVIEW OF LITERATURE

In the previous chapter, the literature relating to the problems of adequate conceptualization of "job satisfaction" was reviewed. In the present chapter, the remaining review of the literature is in five parts, each focusing on a different aspect as follows:

- the problems of the measurement of job satisfaction,
- the sources of job satisfaction,
- the relationship between overall job satisfaction and personal characteristics,
- the relationship between overall job satisfaction and organizational characteristics, and
- the relationship between job satisfaction and other work behaviours.

The literature review located no studies on job satisfaction of educators in Rehabilitation Medicine. Therefore, the review of literature was drawn from research reports of studies carried out in other areas of education, or in non-educational settings. There is an abundance of literature in these areas. In 1969, Locke estimated that over 2,000 studies had been published on the topic of job satisfaction. Attention has been focused to those research findings which have direct significance to the present study.

MEASUREMENT PROBLEMS

Wanous and Lawler (1972) presented data comparing nine different

methods of measuring job satisfaction. They concluded that there is no one best way to measure job satisfaction. They pointed out that the "best" measure may depend upon the independent or dependent variables to which the satisfaction measure is to be related. Their data, however, suggest that it is possible to measure job satisfaction validly with different job facets, since there are probably several types of feelings that people have which can be called satisfaction or which influence their feelings of satisfaction about their jobs.

The usual method of measuring job satisfaction, other than by an interview approach, is by administering a questionnaire containing items which are pertinent to satisfaction with various facets of the job. For example, the most widely used questionnaires are the Brayfield-Rothe Questionnaire (1951), the Job Descriptive Index (JDI) designed by Smith et al. (1969), and the Minnesota Satisfaction Questionnaire. The JDI has been described by Vroom (1964:10) as "without doubt the most carefully constructed measure of job satisfaction in existence today." This adjective check list instrument measures job satisfaction with only five aspects (facets) of the job: the work itself, the supervision, the co-workers, pay and promotion. The five job facets do not seem exhaustive enough to embrace the crucial facets of the work for the group being studied in this research. Conroy (1979) found out that the addition of a "student area" to the JDI made a significant impact on the measurement of teacher job satisfaction. It appears that Smith, Kendall and Hulin (1969:55) were sensitive enough to this issue when they suggested that "to 'make the measurement fit the clime' may perhaps prove productive in measuring satisfaction for some people in more highly skilled and professional areas." Katz and Van

Maanen (1977:483) strongly recommended that in all conceptualization and measurement of job satisfaction, better objective description of work situations is required.

The Importance Rating

One important dimension which has frequently remained unaccounted for in the measurement of job satisfaction is the importance of each facet of the job to the respondent. An understanding of the worker's job satisfaction requires knowledge of the importance to the worker of the various facets of the work situation. Friedlander (1965b) and Hinrichs (1968), in their studies of different occupational groups have shown that there are systematic differences in the importance ratings of various job facets.

The desirability of using employees' ratings of the importance of a job facet as a weighting in computing data on job satisfaction has received both positive and negative support from researchers on job attitudes. Youngberg et al. (1962) and Glennon et al. (1960) found that the use of importance and satisfaction measures together produced better results than satisfaction measures used alone. Other researchers such as Locke (1969), and Mobley and Locke (1970), maintain that importance ratings are already reflected in the satisfaction ratings, and therefore the weighting procedure adds nothing to the prediction of overall job satisfaction. Similarly, researchers such as Schaffer (1953), Ewen (1967:71), Mikes and Hulin (1968:389), Blood (1971), and Wanous and Lawler (1972), have attempted to improve predictions of overall job satisfaction by weighting satisfaction with job facets by rated importance. They reported that although the results obtained

correlated with overall job satisfaction, they failed to show an improvement over the prediction using unweighted facets. However, Schaffer (1953) and Even (1967), did report that there is an indication that the correlation between facet satisfaction and overall satisfaction increases as the rated importance of the facet increases.

On the other hand, Wanous and Lawler (1972) found a significant correlation (r = .61) between facet importance and the correlation of facet satisfaction with overall job satisfaction. They pointed out that "the 'importance' measures do seem to have meaning in that they indicate how much influence satisfaction with a particular facet has on overall satisfaction." Along the same line, Kraut (1975) argues that it is more likely that the employee himself is the best means of properly weighting and integrating the factors that go into a decision to quit or to remain in a job. The discussions here indicate that unit weighting (that is, equal weighting for all facets), ignores the individual differences and is therefore, a false assumption of equality for all job facets to the respondent. For example, being highly satisfied with the parking facilities in a university may not be interpreted as of equal importance to a professor as being highly satisfied with the availability of facilities for clinical research in the same institution. Kraut aptly pointed out that failure to consider the intrinsic differences among people may lead to unexplainable differences or even erroneous inferences when job satisfaction data are compared across stratified occupational groups.

Locke (1969:331) succinctly summarizes the problems of measurement of job satisfaction as follows:

> Intensity of satisfaction and value importance cannot be measured in terms of any known physical (or psychological) units. It would be an error to conclude from this that these concepts are not meaningful, however. By introspection it can be observed that men do experience different degrees of satisfaction and dissatisfaction and do value things to different degrees. (It should be possible to rate these factors on an ordinal scale).

Mobley and Locke (1970) and Friedlander (1965a), have shown that those facets which are most important to workers are usually those that receive the most extreme positive or negative satisfaction ratings. By implication these reports suggest that people tend to rank highest those things which they both value and lack. These findings suggest that the most dissatisfying factors in an employee's job are those factors which are most important to him. Quinn and Mangione (1973) maintain that the facets of the job that are of little importance are characterized by more restricted ranges of attitudinal responses. Since it is to be expected that educators do differ in terms of the job facets that are important to them, the estimate of overall job satisfaction based upon their ratings of the job facets may be improved if the importance ratings of those facets are taken into consideration.

Many studies have attempted to improve the prediction of overall job satisfaction by the use of importance ratings. Some have found that the sum of the importance weighted scores does not predict ratings of overall job satisfaction any better than the simple sum of the unweighted satisfaction scores (Decker, 1955; Ewen, 1967; Schaffer, 1953; Mikes and Hulin, 1968). In each of these studies the criterion measure of overall satisfaction with which the association was sought was a facet-free satisfaction scale such as the General Motors Face Scale (Kunin, 1955) - a one-item graphic scale. Quinn and Mangione (1973:3), point out, however, that this does not mean that the weighted measures

were necessarily invalid but simply that they were no better than the more economic unweighted sums.

Blood (1969:456) in his study of 448 airmen from the United States Air Force found consistent relationships between measures of their job satisfaction and their work values. Blood's results suggest the need for a consideration of the worker's perceived importance of the work done in the organization in the criterion measure of the intensity of overall satisfaction. In summary, the above review suggests the need for further research on the differences between the importance of weighted and unweighted measures of overall job satisfaction. Decker (1973) and Wanous and Lawler (1972), emphasized that future research is needed on the validation of attitude survey measures.

THE SOURCES OF JOB SATISFACTION

The different conceptualizations of job satisfaction have led to different approaches to viewing the sources and determinants of job satisfaction.

The Need-Fulfillment Theory

Job satisfaction has been viewed as determined by the extent to which the work environment provides for the fulfillment of the workers' needs. The proponents of this view are Porter (1961), Katzell (1964), Locke (1969) and Schneider and Alderfer (1973). The focus of this group has been on Maslow's need hierarchy theory. By this theory, human needs are viewed as related to one another, and arranged in a five-step hierarchical order. The more prepotent lower order needs--the physiological, safety and social needs in this order--precede the

higher order needs such as esteem and self-actualization. Maslow maintained that the higher order needs become activated as the lower order needs become satisfied. Maslow clearly explained that when lower-order needs are deprived, they tend to re-emerge and dominate the behaviour of the incumbent. Using Maslow's need hierarchy theory as a basis, Porter as well as Schneider and Alderfer have developed instruments for measuring the level of an individual's perceived need satisfaction in an organization. For example, Porter (1961) in his study of the need-satisfaction of managers, using his need-fulfillment questionnaire, found that self-actualization is the least met need for all managers; while esteem, security and autonomy are more often satisfied for middle than for bottom managers.

Intrinsic and Extrinsic Rewards as Sources of Job Satisfaction

Job satisfaction has also been viewed as a function of the rewards a person receives on the job. This approach is taken by Porter and Lawler (1968), and Slocum (1971). The rewards can be subdivided into two categories: intrinsic and extrinsic, also often referred to as content and context variables.

Saleh and Grygier (1969:446) define intrinsic rewards as "those directly related to actual performance of the job," and extrinsic rewards as "those related to the environment in which the job is being performed." Deci (1972:218) defines intrinsic rewards as "those mediated by the person himself" while those externally mediated (by someone other than the employee himself) he called extrinsic rewards.

Slocum (1971:312) maintains that intrinsic rewards are associated with the satisfaction of higher-order needs while extrinsic rewards

such as pay, promotion, and security are often primarily associated with the satisfaction of the lower-order needs discussed by Maslow. Wernimont (1972:173) summarized the definitions as follows: "All intrinsic factors are internal feelings while extrinsic factors are external situations."

As a summary, intrinsic rewards give rise to intrinsic job satisfaction. Satisfaction arising from the performance of the job itself produces in the individual such feelings as accomplishment, responsibility and recognition. Extrinsic rewards give rise to extrinsic satisfaction. Extrinsic satisfaction arises from the interactions of the employees with factors which are peripheral to the actual job duties such as administrative practices and policies, working conditions, interpersonal relations, pay and promotions.

The intrinsic rewards approximate Herzberg's (1959) "motivators/satisfiers" since their presence motivates employees to greater performance. The extrinsic rewards do not approximate Herzberg's "hygienes" insofar as he maintains that their presence only serves to prevent dissatisfaction from occurring and can neither induce employees toward extra effort nor cause satisfaction. It is for this reason that Locke (1969:332) postulated that Herzberg, in effect, was arguing that the importance of work content (intrinsic) factors drops to zero when the content values are frustrated, and that when extrinsic work values are fulfilled their importance drops to zero so that no satisfaction results.

Job Content/Context as Sources of Job Satisfaction

Job satisfaction has also been viewed as a function of the

person's perceived characteristics of the job. Many studies have been reported which indicate that by far the strongest determinants of job satisfaction are the characteristics of the job itself (Bisconti and Solmon, 1977:24; Locke, 1973; Armstrong, 1971; Smith, Kendall and Hulin, 1969). Armstrong (1971) reported that regardless of the occupational level among engineers and assemblers, satisfaction with the content factor made the greatest contribution to the employee's overall job satisfaction. He found, however, that the content aspects of the job were more important for engineers, while the context aspects were more important for the assemblers. That the job content or intrinsic factors are more potent sources of both job satisfaction and dissatisfaction than job context or extrinsic factors is supported by the findings of Friedlander (1964), Graen (1966), Hulin and Waters (1971), and Waters and Waters (1972).

Reports on studies in education provide similar findings. Schmidt (1976) found that the sources of satisfaction for school administrators were achievement, recognition and advancement. Earlier, Sergiovanni (1967) replicated Herzberg's study and found that teachers in New York State were motivated by recognition, responsibility, and opportunity for achievement in their work. Sergiovanni concluded that the factors which accounted for the teachers' positive attitudes were related to work itself, while the factors which accounted for their negative attitudes were related to working conditions. Wickstrom (1973:2), in his study of the job satisfaction of public elementary and secondary school teachers in Saskatoon, found that these teachers identified in the order of rated importance the four top-ranking "satisfiers" as: sense of achievement, the work itself, good interpersonal

relationships with students, and responsibility.

The literature on job enrichment indicates that the average worker is both happier and more effective if working on an enriched job than if working on a routine, standardized, repetitive one. If this is a fact of life, the average worker, within limits, would have a greater chance of experiencing job satisfaction on a challenging, non-repetitive job than the converse. Katz (1964) maintains that the motivational path to high performance can be reached through the development of individual intrinsic job satisfaction. The indications are that the characteristics of the work that would arouse intrinsic job satisfaction and commitment to the job are: sufficient complexity, sufficient challenge, and sufficient skill requirements to engage the abilities of the employee. All of these will vary across individuals. Rice (1978) maintains that variety in the job provides a worker with an opportunity for accomplishment through the use of skills and abilities which are personally valued. Vroom (1964) points out that such opportunity leads to the satisfaction of self-actualization needs.

The Interactionist Approach to Job Satisfaction

Job satisfaction has also been viewed as a result of the mutual interaction between the employee and his work environment. This theoretical framework for conceptualizing job satisfaction is advocated by Lofquist and Dawis (1969). They explain that the basic principle of this approach is that of work adjustment. In essence this theory states that each individual tends to strive to achieve and maintain "correspondence" with the work environment. Prittchard and Peters (1974:316) describe correspondence as "the individual's fulfilling

the requirements of the work environment, and the work environment fulfilling the requirements of the individual." Locke (1969:316) subscribes to the interactionist approach to job satisfaction. He defines job satisfaction as ". . . the pleasurable emotional state resulting from the appraisal of one's job as achieving or facilitating one's job values." Thus Locke (1969:316) sees job satisfaction/dissatisfaction as "a function of the perceived relationship between what one wants from one's job and what one perceives it as offering."

This approach entails an appraisal process which borders upon two other theories already described in the conceptual framework for this study, namely, the equity theory and the discrepancy theory. Locke (1969:319) summarized this approach to understanding and predicting job satisfaction as follows:

> The causes of job satisfaction are not in the job nor solely in the man but lie in the relationship between them. The prediction of job satisfaction necessarily requires an interactive approach--not because 20 or 30 correlational studies have "proved" it, but because of the nature of man and the evaluative process.

RELATIONSHIP BETWEEN JOB SATISFACTION AND PERSONAL VARIABLES

A number of studies have been reported that have investigated the influence of some biographical characteristics such as age, sex and education on the feelings of job satisfaction. The review of literature discussed below includes the research findings of such studies.

Age and Job Satisfaction

Many studies on job satisfaction have reported a positive linear relationship between age and job satisfaction. Some of such

studies include Chen (1977), Glenn, Taylor and Weaver (1977), Hunt and Saul (1975), Bembry (1975), Gibson and Klein (1970), Saleh and Hyde (1969), Hulin and Smith (1965), Saleh and Otis (1964) and Porter (1962). Hulin and Smith (1965) in their study of male and female workers in two electronics plants found that the relationships between age, tenure and job satisfaction were positive and linear but different for male and female workers. They concluded that the three variables were unlikely to be similarly interrelated under all conditions for all individuals. Saleh and Otis (1964) reported a slightly different finding. They found a positive linear relationship between age and job satisfaction up to the pre-retirement age, beyond which the subjects reported decrements in the level of job satisfaction. In their studies among teachers both Bembry (1975) and Chen (1977) reported that older teachers expressed more job satisfaction than did younger teachers.

A possible explanation of these findings can be found in the proposition of March and Simon (1958) that workers perceive a decrease in the availability of job alternatives as they become older. Lofquist and Dawis (1969) state that with the necessity to adjust to the perception of limited job alternatives, along with the increasing need to adapt to the particular work environment, employees will report an increase in job satisfaction as they become older. This suggests that as increasing maturity and work experience bring a realistic adjustment in the workers' expectations satisfaction tends to increase.

On the other hand, other researchers have proposed a U-shaped relationship between age and job satisfaction. The chief proponent of this type of relationship is Herzberg and associates (1957). They report that when people started their first job, job satisfaction was

found to be high. Job satisfaction subsequently declined with age (and tenure) up to some point, and then began to rise again. Once the workers' level of satisfaction increased again, it continued for the rest of their tenure in the organization. Based on an extensive review of the literature Herzberg provided an explanation for these findings. He explained that the initial satisfaction was a result of the "newness" and challenge of the job. Some of the workers' initial high expectations are often not fulfilled hence a drop in job satisfaction results. But, with advancing years, the worker's maturity and work experience bring a realistic adjustment in his expectations culminating in an increase in the feeling of job satisfaction.

Other age differences in job satisfaction have been attributed to perceptual differences of working situations between the age groups. For example, Miskel (1973) found that younger educators tended to regard as important such factors as pay, benefits, physical working conditions and opportunity to be innovative. On the other hand, Wild and Dawson (1976) reported findings which confirmed those of Porter and Lawler (1968) that with advancing age, managers tended to place more importance on recognition and social relationships.

Sex and Job Satisfaction

The research findings on sex differences in job satisfaction are inconclusive. While the reports of some studies indicate that there are differences, others report no significant differences among the sexes in their level of overall job satisfaction.

Among the studies which reported sex differences in job satisfaction are those conducted by Hulin and Smith (1964), Centers and

Bugental (1966), Armstrong (1971), Shapiro and Wahba (1973) and Weaver (1974). Hulin and Smith (1964) used the JDI of Smith et al. (1969) to collect data, the analysis of which revealed sex differences in the job satisfaction of workers in four different plants. Their results showed that in three of the four plants, female workers were less satisfied with their overall job situation than the males. Females were found to be slightly more satisfied with their pay, but less satisfied than the males with promotions, supervision, co-workers and the work itself.

Results slightly different from those of Hulin and Smith were obtained by Shapiro and Wahba (1973) and Weaver (1974) in their studies of employees in public service-type organizations. They reported that women who were described as career and professionally oriented, were less satisfied with their level of pay, rate of promotion and their overall job satisfaction than were their male counterparts.

Some studies have found no significant difference in the level of job satisfaction between the sexes. They include the studies reported by Manthe (1976), Sauser and York (1978), and Weaver (1978). Manthe (1976) found no significant difference in the level of job satisfaction between men and women who were employed in the West Virginia University Extension Service. Sauser and York (1978) carried out a study designed to test the hypothesis that the observed sex differences in job satisfaction were due not to the influence of sex per se, but rather due to the effects of several variables which covary with sex. Biographical and job satisfaction data were obtained from 154 male and 326 female state government employees. They reported that the significant observed differences (male greater than female) in satisfactions with promotions

and work did not hold when the effects of age, education, tenure in the organization, tenure in present position, etc., were held constant through analysis of covariance. As a result, Sauser and York (1978) concluded that their study demonstrated that "there are a number of variables which modify the sex-job satisfaction relationship."

In the education sector, the findings on the sex-job satisfaction relationship have been equally inconsistent. Chase (1951), Holdaway (1971, 1978:75), Belasco and Alutto (1972), Wickstrom (1973), and Lortie (1975:91), all reported sex differences in their studies of job satisfaction of teachers. Each found that female teachers reported more satisfaction than their male counterparts. Research findings contrary to these were reported by Hollon and Gemmill (1976) following their study on a different population comprising faculty members in seven two-year public community colleges in the United States. They found that women professionals in academic positions experienced a lower level of overall job satisfaction.

It seems that some of the studies in which sex-job satisfaction differences have been found have been conducted in situations in which the conditions of work remain dramatically different for the sexes. In such a situation, the reports have tapped the discrepancy for the employed women between the objective conditions and their subjective evaluations of their work. Weaver (1978:271) accordingly maintains that:

> in a given situation, if the sexes are unequally affected by the determinants of job satisfaction such as wages, prestige, . . . or other influences such as social norms which differentially intervene between job satisfaction and these determinants, then sex differences in job satisfaction can be expected to result.

Weaver's point of view supports that of Golembiewski (1977). Golem-

biewski found that when only sex differences are considered, the data more often than not support the common stereotype that the sexes derive different satisfaction from work. He observed, however, that the sex-stereotypic view gets little support when the differences in hierarchical rank are also taken into account. He concluded that gross male versus female comparisons in job satisfaction without controlling for hierarchical status may be misleading where the research population is heavily weighted by females who have low hierarchical status.

In summary, substantial differences between the sexes in satisfaction with work need not exist if the conditions of employment are more or less comparable. The observed differences in job satisfaction between the sexes may be attributed to other factors which covary with sex.

Level of Education and Job Satisfaction

One biographical characteristic which all workers bring to their jobs is their educational level. Some studies in the literature report that educational level influences the worker's expectations concerning job rewards as well as his job perceptions in general, such that the higher the educational level, the higher the worker's expectations. Such studies include these of Vollmer and Kinney (1955), Singh and Baungartel (1966), Friedlander (1966), Klein and Maher (1968) and Seybolt (1976).

Singh and Baungartel (1966) found that among airline mechanics "the level of educational achievement bears a positive relationship with advancement motivation." This finding is supported by Smith et al. (1969:101) who posited that "education is likely to be an index of sources of satisfaction; with better educated workers more likely to

occupy situations with more desirable features."

There is, however, some evidence that suggests that employees who have acquired higher education are less satisfied with their pay than their counterparts [illegible] lower education. Klein and Maher (1968) maintain that a key [illegible] determining salary satisfaction is the relevant others to wh[illegible]dividual compares himself. The explanation for this princip[illegible]ges on the equity theory. Lawler (1971) strongly maintains that a person with more education has higher perceived inputs and even with perceived job opportunities being equal, will be more dissatisfied.

The generalizability of the studies which have reported a positive relationship between educational level and worker satisfaction is open to question. The subjects in such groups (Singh and Baungartel, 1966; Klein and Maher, 1968; Seybolt, 1976) had a limited range of education. Of special interest, however, are studies in the educational field reported by Brown (1976) and Chen (1977). Brown found that educational administrators who had doctorates reported significantly greater satisfaction from their jobs than their colleagues without doctorates. The result of Brown's finding must be interpreted with caution as it did not compare beginning administrators with higher degrees to older administrators with lower degrees and higher ranks. On the other hand, Chen (1977) found a significant negative correlation between job satisfaction and teachers' education among teachers in the Republic of China.

RELATIONSHIP BETWEEN SPECIFIC ORGANIZATIONAL VARIABLES AND JOB SATISFACTION

There has been considerable research aimed at determining the effects of certain organizational characteristics on job satisfaction. This section of the literature review is a summary of the findings regarding relationships between such variables as occupational levels, pay and promotions, and inter-personal relationships, and employee job satisfaction.

Job Level/Rank and Job Satisfaction

Much attention has been focused on the relationship between the hierarchical job level and employee job satisfaction. There is a consistent body of evidence which shows that the higher a worker is in the occupational hierarchy, the higher the individual's job satisfaction. This evidence comes from studies reported by Herzberg et al. (1957); Vroom (1964); Porter (1961, 1962, 1963); Waters and Waters (1969); Wild (1970); and Kahn (1972). Kahn (1972) reported a linear relationship between occupational prestige and job satisfaction.

Porter investigated the difference in need-satisfactions among various groups of managers. Porter's results (1961, 1962, 1963) showed an increasing level of job satisfaction of managers relative to their level in the organizational hierarchy. Herman and Hulin (1972) reported similar results. Tannenbaum et al. (1974) stated that it is not surprising that such a relationship should exist since higher job levels frequently offer more pay, more power, more autonomy, higher social status, greater responsibility, greater discretion and more task variety and complexity.

In education, Chen (1977) in his study of the job satisfaction of school teachers in the Republic of China found that teachers in administrative positions showed a higher level of satisfaction than did classroom and general teachers,

Pay and Promotional Opportunities and Job Satisfaction

There is some evidence that the pay an individual receives is of major importance in satisfying various individual needs (Lawler, 1971). It is therefore possible that pay may be crucial in a given individual's job attitude. Both Bembry (1975) and Chen (1977) reported a significant positive correlation coefficient between job satisfaction and salary. Hinrichs (1968:501) found that pay did represent a very important component of job satisfaction and dissatisfaction for employees of all levels, while the components of the work context which were most important in contributing to overall satisfaction differed for differing levels of employees.

People tend to move up in the hierarchical order as they stay longer with the organization and as they become older, in which case all other things being equal, pay, promotional opportunities and rank would tend to be positively related to job satisfaction. Korman (1977: 224) points out that pay and promotional opportunities are "tied up with occupational levels and also have social prestige themselves." Korman further points out that each of the variables also has the capacity to fulfill an increasing number of needs the more they are increased, thus meeting the personal-fulfillment component of job satisfaction. Clearly related to pay and promotional opportunities is

the number of years of experience. A number of studies carried out in education have reported a significant positive relationship between the number of years of teaching experience in the present position and job satisfaction.

Interpersonal Relationships and Job Satisfaction

Interpersonal relations pervade all organizations. Such interactions prevail among all workers with their superiors, peers and subordinates. Herzberg et al. (1967) regard interpersonal relations as a hygiene factor just as Maslow would classify it as a low-order need. Several studies have been reported in education whose findings are not complementary. Sergiovanni (1967) found that "interpersonal relationships" was not given as a "satisfier" by the teachers in a county of New York State. His report was not supported by the findings of Savage (1967) (cited in Holdaway, 1978:15) who reported that interpersonal relationships with students was a "satisfier." Wickstrom (1973) like [illegible] that good interpersonal relationships with subordinates [illegible] of four top ranking "satisfiers" for the public elementary and secondary school teachers in Saskatoon. Schmitz (1977) found [illegible] reported dissatisfaction with their jobs when they [illegible] respect for their supervisor(s) or had poor interpersonal [illegible] with their superior(s) and when they had poor relations with their colleagues and members of the faculty.

RELATIONSHIPS BETWEEN JOB SATISFACTION AND OTHER WORK BEHAVIOURS

The relationships between satisfaction with the job and other

work behaviours have been of great interest to industrial psychologists and sociologists. Of special significance are: (1) Is job satisfaction a determinant of job performance? (2) Is job satisfaction the effect of job performance? (3) Does job satisfaction bear any relationship to productivity? and (4) Is there any relationship between job satisfaction/dissatisfaction and job turnover and absenteeism? The review of literature in this section will deal with the findings on the relationship between job satisfaction and job performance, job turnover and productivity.

Job Satisfaction and Performance

The relationship between job satisfaction and performance attracted attention during the "human relations" era following the Hawthorne studies. As a result of the intuitive appeal to the human relations theorists the earliest hypothesis regarding this relationship was that satisfaction on the job was related directly to greater performance and productivity. Many studies have since failed to support the existence of a linear relationship between job satisfaction and performance.

Brayfield and Crockett (1955) were the first researchers to carry out a comprehensive review of research on the relationship between employee job satisfaction and job performance. From their review, they concluded that there was little evidence of a simple direct relationship between the two variables. Other researchers, notably, Herzberg and associates (1957) also arrived at the same conclusion but attributed the absence of a relationship to possible errors in measurement. A further review of correlational studies

in this area was carried out by Vroom (1964). He reported a statistically insignificant (r = .14) median correlation between employee job satisfaction and various measures of job performance.

In view of the lack of correlation between the two variables, other studies have focused on possible factors that might affect the job satisfaction-job performance relationship. Porter and Lawler (1968) and Cherrington et al. (1971) have presented data proposing a different model for the relationship. Porter and Lawler (1968) stated that performance leads to satisfaction and that performance is a function of the combined effects of efforts, ability and role perception. This model has been supported and extended by Locke (1970), Cherrington, Reitz and Scott (1971) and Slocum (1970, 1971). Whereas Porter and Lawler (1968) and Locke (1970) maintain that performance is a much stronger cause of job satisfaction than the converse, Slocum in his two studies (1970, 1971) found that job satisfaction and performance were more closely related for upper than lower level managers. It was the causal relationship among these variables that was missing in all the reports cited.

Steers (1975:678) points out that most of the earlier investigations focused exclusively on the relationship between performance and job satisfaction and had not considered the possibility that other factors might affect such a relationship. To this effect more recent investigators have tried to identify those variables that moderate the relationship between performance and job satisfaction. The variables that have been identified as moderators in the job performance-job satisfaction relationship include the reward system (Porter and Lawler, 1968; Slocum, 1970:71; Cherrington et al., 1971; Kesselman,

Wood and Hagen, 1974; Wanous, 1974); variation in need strength (Hackman and Lawler, 1971; Steers, 1975); and pressure to produce (Ewen, 1973).

In his study of newly hire women telephone operators Wanous (1974) found that the overall relationship between satisfaction and performance was slightly positive, but the direction of the relationship was not clear enough to deduce causality. On further analysis, Wanous found that when job satisfaction was separated into intrinsic and extrinsic components, the data suggested that performance causes intrinsic satisfaction and that extrinsic satisfaction causes performance. This finding supports that of Schneider and Olson (1970). They found that among hospital workers, where salary was linked to performance a higher correlation existed between satisfaction with salary and the quality of job performance.

Other researchers have identified the moderator in the job satisfaction-performance relationship as need-strengths. Slocum (1970) found that performance and satisfaction were more closely related for the higher level needs commonly associated with intrinsic rewards than they were for the lower level needs. Porter and Lawler (1969) and Hackman and Lawler (1971) reported similar results. They hypothesize that performance will lead to satisfaction of higher level needs if the tasks provide opportunities to do a meaningful and identifiable portion of the work, if they result in outcomes that are intrinsically meaningful or otherwise experienced as worthwhile by the individual, and if they provide feedback about what has been accomplished. In addition, Hackman and Lawler (1971) suggest that variations in employee need-strengths may also represent an important moderator in the job performance-job satisfaction relationship. They posit that individuals with

higher growth needs might show a stronger relationship between performance and job satisfaction on relatively challenging tasks than individuals with weaker levels of growth need-strength. Other researchers have maintained that to examine the performance-satisfaction relationship it is worthwhile to categorize jobs on the basis of whether they are high stimulating or low stimulating jobs (Ivancevich, 1979:220). This approach to the examination of the relationship between satisfaction and performance had been utilized by Baird (1976) in his study of 214 employees in a state agency. He found that analysis of variance and correlational analysis revealed an opposite relationship to his hypothesis that on stimulating jobs, satisfaction would be positively related to performance.

Given the above array of findings a number of authors, including Locke (1970), Schwab and Cummings (1970) and Sutermeister (1971) maintain that either causal relationship could exist between job satisfaction and job performance depending on the workers' value system, and the type of working environment. To this effect Steers (1975:678) suggests the necessity for considering both individual differences and work environment characteristics in any model relating performance and rewards to resulting job satisfaction. Steers' suggestion complements those of Herman (1973).

Herman's (1973) "Situational Contingencies" model seems to provide an explanation to the confusion regarding the job attitude-job performance relationship. Herman conceptualizes job attitude as an affective response to some stimulus or "attitude object"--a predisposition to act or to behave in a certain manner. She describes job performance as an outcome of a number of job behaviours and therefore it

stands as a complex summary measure. She hypothesizes that when the contingencies surrounding the situation in which job performance must occur are highly structured either in the physical properties of the task or the characteristics of the work situation, an attitude-performance relationship cannot be expected. In such a case there would be no job satisfaction-performance relationship. On the other hand, Herman maintains that if the job behaviours are primarily worker controlled, that is, the worker is free of situational constraints in choosing among behavioural alternatives, then a job attitude-job performance relationship would be expected. In other words, the reported relationships are just measures of the degree to which situational contingencies structure the performance setting.

Job Satisfaction and Productivity

Like performance, productivity has not been directly linked with job satisfaction. There are indications, however, that dissatisfied workers have higher turnover rates and absenteeism rates than satisfied workers (Guion, 1965; Lawler and Porter, 1967). DuBrin (1972:264) maintains that the lack of distinction between satisfaction and motivation leads to a lack of understanding regarding why job satisfaction does not necessarily lead to high productivity. He suggests that poorly motivated individuals are content with jobs that do not require high productivity whereas highly motivated workers persist in their efforts even when their job satisfaction is low. DuBrin states that the latter observation explains why well motivated people often represent high turnover risks as they tend to work hard in spite of low job satisfaction, but leave the organization to find higher job

satisfaction elsewhere.

Bass (1965) suggests that a productive worker may manifest more dissatisfaction with certain conflicting aspects of his work as a consequence of his involvement and interest in the work. This view is further extended by Lawler (1974) who maintains that job satisfaction does not cause employees to work harder. In other words, job satisfaction does not necessarily lead to high productivity. A modified view is presented by Brayfield and Crockett (1955) who state that high productivity and job satisfaction can be expected to occur together only when productivity is perceived as a means to important goals and when those goals are achieved. Katzell and Yankelovich (1975) contribute to the latter view. Much as job satisfaction has not been directly linked with productivity, Katzell and Yankelovich (1975:71) believe that the two are not incompatible and that in fact there is evidence that they can be achieved together.

Job Satisfaction and Turnover (Mobility)

Some relationship has been found between job satisfaction and work related job escape behaviours such as turnover and absenteeism and even job behaviours such as filing grievances and sabotage.

An extensive review of literature by Porter and Steers (1973) showed that overall job satisfaction was consistently and inversely related to employee turnover. Other researchers, such as Mobley (1977), Locke (1975, 1976), Waters and Roach (1971), Hulin (1966, 1968), Vroom (1964) and Brayfield and Crockett (1955) reported similar findings. Flowers and Hughes (1973) found that employees' reasons for staying in a job varied with the job level and with work values. They indi-

cated, for example, that higher skilled employees were more likely to stay for job satisfaction than for external factors, whereas the reverse was true for the lower-skilled employees. Flowers and Hughes (1973) also noted that the reasons for staying may not be simply the opposite of the reason for leaving.

The reasons for this lack of a simple continuum is explained by Newcomb et al. (1965). They point out that the relationship between attitudes and behaviour is not a direct one. They maintain that behaviour is a function of a number of attitudes and the situation in which the behaviour occurs. Similarly, Herman (1973) and Hulin (1976) both report that the decision of an employee to leave an organization may be affected by other factors than job dissatisfaction such as the availability of an alternative job, the individual's age, the possibility of securing the alternative job, and the individual's ability to maintain the standard of living supported by the current job. In other words, they maintain that turnover is a decision made in the context of job market conditions.

This explains why Mobley (1977) presented a heuristic model of the employee withdrawal decision process. He suggested that one of the primary consequences of job dissatisfaction is to stimulate thoughts of quitting, leading to an evaluation of the expected utility of search, the intention to quit and finally a decision to physically withdraw. By this model the availability of alternative employment (based on the vacancy rate and employment levels) would exert a significant influence on the turnover.

Mobley et al. (1978) found a high negative correlation between satisfaction and the frequency of thinking of quitting. This finding was

complementary to that of Atchinson and Lefferts (1972) that the frequency with which people thought about quitting their jobs was significantly related to the actual termination. Implicit in these findings is that satisfied employees are most likely to be committed to the job and therefore, less likely to quit. The reverse is also equally true (Guion, 1965; Lawler and Porter, 1967; Lawler, 1973). Lawler (1973) in his review of studies on turnover concluded that dissatisfied workers were more likely to terminate their employment than satisfied workers.

March and Simon (1958) conclude that the greater the individual's satisfaction with the job, the less he is likely to desire to change jobs, and the greater the extra-organizational alternatives for another job, the greater is the perceived ease of movement. To what extent these findings can be generalized to professional educators in higher education is open to question. Metzner and Mann (1976) point out that the negative relationship between job satisfaction and absenteeism would seem not to hold for individuals in highly skilled jobs and higher occupational levels.

SUMMARY OF REVIEW OF LITERATURE

The literature review shows that job satisfaction has been extensively studied, more so in industrial and other non-educational situations than in school settings. In spite of the extensive research on the topic the different operational definitions and conceptualizations have led to some measurement problems. Of special controversy is the question of the use of importance ratings in computing overall satisfaction. The research reviewed indicates that importance rating

of the job facets correlates significantly with overall job satisfaction (Wanous and Lawler, 1972; Youngberg et al., 1962; Glennon et al., 1960).

The different conceptualizations have also led to different approaches to viewing the sources of job satisfaction. On one hand, it has been viewed as the extent to which the work environment provides for the fulfillment of the worker's needs; on the other, it has been viewed as a function of the intrinsic and extrinsic rewards a person receives from the job. Yet others such as Locke (1969) and Prittchard and Peters (1974), see job satisfaction as a result of the interaction between "the man" and the job.

Overall job satisfaction has been found to relate to certain personal characteristics such as age, sex, and education. A positive linear relationship exists between age and job satisfaction whereas the relationship between sex and job satisfaction seems confusing. The majority of researchers seem to agree that any difference between sexes in job satisfaction may be accounted for by other factors which covary with sex (Sauser and York, 1978; Weaver, 1978). The differences in job satisfaction due to education levels have been attributed to the fact that education raises one's levels of expectation.

A relationship also exists between certain organizational variables and job satisfaction. The worker's rank in the organization, the number of years of experience in the current position, the level of pay and promotional opportunities each seems to bear a positive linear relationship to the worker's overall job satisfaction.

Whereas Herzberg et al. (1959), whose research was conducted in a non-school setting view interpersonal relationships as hygiene factors,

researchers in school settings such as Savage (1967) and Wickstrom (1973) report that interpersonal relationships with students was given by the teachers as "satisfiers."

The research on the relationship between job satisfaction and other work behaviours such as performance, productivity and turnover indicates an indirect relationship between the variables. The reasons are that the relationships are moderated by intervening variables and behaviour is a function of a number of attitudes and the situation in which the behaviour occurs. In other words, the different frames of reference of employees influence their perceptions of job satisfaction. It is such perceptual differences in job satisfaction associated with different personal and situational frames of reference that this research was designed to examine.

Chapter IV

RESEARCH DESIGN AND METHODOLOGY

The instrumentation and research methodology along with an outline of the plans for a pilot study and methods of data analysis are presented in this chapter. They are discussed under the following headings:

- Research Design:
  - The Research Instrumentation - The Questionnaire
  - Validation of the Research Instrument
  - The Pilot Test
  - The Reliability of the Instrument
- The Administration of the Questionnaire and Data Collection
- The Method of Data Analysis

RESEARCH DESIGN

The Questionnaire

The data that were to be analyzed for this study were obtained by means of a questionnaire. In view of the fact that the Job Description Index of Smith, Kendall and Hulin (1969) was not specifically designed for use with educators in a post-secondary education setting, a questionnaire specifically relevant to the group under study was designed. The intention was to tap as many facets as possible which reflected the characteristics of the job of educators in Rehabilitation Medicine. This is in keeping with the suggestions of Smith et al.

(1969:55), the authors of the JDI, that "to 'make the measurement fit the clime' may perhaps prove productive in measuring satisfaction for some people in more highly skilled and professional areas." The items in the questionnaire were developed by the researcher on the following bases:

(a) A series of consultative interviews were held with some educators in Rehabilitation Medicine.

(b) A review of the literature on job satisfaction and mobility was undertaken.

(c) Segments of previous instruments used by Murphy (1978), Holdaway (1978), Norton (1978) and Weiss, Davis, England and Lofquist (1967) were incorporated in the design of the instrument.

The resulting questionnaire items were deemed to closely approximate the characteristics of educators in Rehabilitation Medicine in Canada, and their job characteristics. The validation exercise for the instrument is reported in the latter part of this chapter.

The questionnaire contained a preliminary part and 50 items grouped into demographic, job facet, and narrative sections. The questionnaire was prefixed with a preliminary part which was designed to ensure that only those educators who met the criteria for inclusion in the study actually participated in the study. The questions in this section required the subjects to confirm that they had met the criteria for participation before proceeding to Section I, II and III of the questionnaire.

Section I - demographic variables. This section of the questionnaire contained items designed to gather demographic data on the

respondents such as sex, age, highest academic qualification, academic rank, salary level, the number of years in the present school, total years of experience as an educator, the area of primary involvement of time, three questions to identify the mobility characteristics and reasons for a decision to leave present or previous position.

Section II - job facet satisfaction and facet importance. The second section of the questionnaire contained 31 items which were judged to be important and pertain to the facets of the respondents' jobs as sources of possible satisfaction or dissatisfaction to educators in Rehabilitation Medicine. These items pertained to working conditions, the reward system, teaching and teaching-related matters, peer and student-related matters, and professional aspects of the work itself. For all the items, a six-point, verbally anchored, Likert-type scale was used that ranged "highly satisfied" to "highly dissatisfied" with a "not applicable" as "neutral" point. Furthermore, each item required the respondent to indicate on a five-point scale which ranged from "unimportant" to "extremely important," the level of importance of the facet for satisfaction with the job as a whole.

Section III - job aspect satisfaction. Section three of the questionnaire was intended to provide respondents with an opportunity to identify critical incidents they personally experienced on their jobs, which they perceived as sources of unusually high job satisfaction or dissatisfaction. Specifically the section consisted of two open-ended questions requiring the subjects to narrate two incidents, in their jobs as educators, which contributed most to their feeling of unusually high satisfaction with their jobs, and two incidents, in their jobs as educators, which contributed most to their feeling of unusually

high dissatisfaction with their jobs.

Overall satisfaction. In this study overall job satisfaction was measured as a function of the sum of the importance-weighted job facet satisfactions. This measure was chosen instead of the usual single item measure in view of the evidence in the literature suggesting the usefulness of the strategy. For example, Wanous and Lawler (1972) concluded that "a single item measure of overall satisfaction is [illegible] reliable than a composite based on 23 items." A similar conclusion was drawn by Lewins and Weitz (1968:268) that the use of a one-item [illegible] satisfaction in tests of a theory (of job satisfaction) was [illegible] strategy. The need for research which is [illegible] the relative importance of the varied components contributing to satisfaction factors was pointed out by Ronan (1970:192).

[illegible] of overall satisfaction were built into the [illegible] analysis only and to test the validity of [illegible] importance measures contribute meaningfully to

as they related to Rehabilitation Medicine and to their wording to avoid ambiguity as well as recording the time taken to complete the questionnaire.

Thus, both content and face validity of the research instrument were established.

The Pilot Study

Dunnette (1966:131) recommends that "subjects in a validation study should bear a close resemblance to the kinds of persons who will be taking the test in the future."

In the validation exercise, nine full-time [illegible] of the Faculty of Rehabilitation Medicine in The University of Alberta were approached and all agreed to assist in the pilot testing of the instrument. They consisted of the Dean of the faculty, six faculty members in the Speech and Hearing Department, and two faculty members who would be absent from the Department of Physical Therapy during the period of the main study. The pilot study was conducted in May 1979.

A total of nine questionnaires with accompanying letters of instruction were mailed to the pilot study group (see Appendix B). All nine questionnaires were returned duly completed and with helpful [illegible] from the subjects on the [illegible] wording of [illegible]. A retest instrument was mailed to them 20 days later. [illegible] (1964:85), the time interval [illegible] three [illegible]

the demographic and narrative sections of the questionnaire. No change was made in Section II of the questionnaire which dealt with job facet satisfaction. There was a consensus of opinion that the questionnaire was an appropriate instrument to use to collect data for this study.

Reliability of the Instrument

The data on the demographic and open-ended sections remained the same and needed no statistical analysis; the responses on the facet satisfaction items were coded. The test-retest method was utilized to estimate the stability of the test and the stability of the trait being measured. Adams (1964:85) indicated that "when reliability is measured by the test-retest method a coefficient of stability is obtained." A positive correlation coefficient of r = 0.88 was obtained between the scores obtained on the two different occasions. This is higher than .50 which Adams recommends as the minimum for any comparison.

Nunnally (1966:231) argues that a correlation coefficient obtained by this method does not reflect errors due to the sampling of items [illegible] the items are the same on both occasions, nor does it [illegible]

yielded a positive correlation coefficient of r = 0.98. Since this is an estimate of the precision of measurement for the half tests, the Spearman-Brown formula was used to estimate the value for the whole test and yielded 0.993 which showed that the instrument was sufficiently reliable to be used in this study.

Alpha coefficient. The Cronbach coefficient alpha for this instrument was 0.94. According to Cronbach (1970:160) this coefficient tells how well scores obtained by a [illegible] administration of the questionnaire represent a universe score. In other words, it refers to the accuracy of just one observation.

ADMINISTRATION OF THE QUESTIONNAIRE AND DATA COLLECTION

The Population

The population for the study consisted of the faculty members who were employed in full-time academic positions during the 1979/80 academic year in Physical and Occupational Therapy programs in 11 Canadian Universities. Upon request, 118 names of the full-time educators currently employed in Physical and Occupational Therapy programs in the 11 universities were sent to the researcher by the heads of the programs. These 118 educators constituted the population of the study.

[illegible]

subjects were requested to respond anonymously to all items on the questionnaire as appropriate and to return their responses in the enclosed, return paid envelope addressed to the researcher. A post-card was also enclosed with each letter of invitation so that the subjects could identify themselves if they required some information on the findings of the study. Responses began to arrive within three days of mailing the questionnaires.

Sixteen days later on September 20th, a follow-up letter was mailed to those educators whose responses had not been received (see Appendix B). A second reminder was sent out on October 15th, to those educators who had not responded to the original request, stressing the importance of their returns to the researcher and appealing for their cooperation (see Appendix B).

The questionnaires were number coded on the bottom of the last page to enable the researcher to identify the non-respondents. The researcher retained a list of the names and their corresponding numbers.

Questionnaire Returns

The advantages of a mail questionnaire over other survey techniques were summarized by Hornseth and Sadlacek (1974:361) in their review of literature on initial returns on mail questionnaires. The [illegible] in terms of time, [illegible]

> Responses to mail questionnaires are generally poor. Returns of less than 40 or 50 percent are common. High percentages are rare. At best, the researcher must contend himself with returns as low as 50 or 60 percent.

On the same problem of low return to mail questionnaires, Travers (1969:199) points out that:

> A questionnaire of some interest to the recipient may be expected to show only a 20 percent return, even when conditions are favorable. If non-respondents are contacted a second and a third time, the return may be increased to 30 percent. Only rarely does it reach the 40 percent level (pp.199-200).

The methods of maximizing returns have been shown in the literature to include colour of stationery (Gullahorn and Gullahorn, 1963), guarantees of anonymity (Mason et al., 1961), length of questionnaire (Mason et al., 1961), use of deadline date (Roeher, 1963), use of personal, concise and attractive cover letter (Parten, 1966), hand-written signature rather than a mimeographed facsimile (Linsky, 1965), and use of vigorous follow-up procedures (Scott, 1961). All these maximization techniques were observed in the administration of the questionnaire.

The returns were a little better than Kerlinger (1973) and Travers (1969) seemed to suggest. Responses were received from 89.83 percent of the subjects in the population. Of the 106 subjects who responded, three were individuals who were screened out by the preliminary questions due to the fact that they were not, strictly speaking, [illegible] in their assignments. Nine other returns were not usable as they were not completed in sufficient [illegible]

analysis.

Altogether, 88.6% percent of the returns representing 79.66 percent of the population being studied were usable and included responses from all programs. The rate of return by institution, ranging from a low of 66.7 percent to a high of 100 percent, is tabulated in Table 1. Since questionnaires were sent to all eligible educators in Rehabilitation Medicine in Canada, each educator had an equal probability of being included in the study. The sample for the study became the educators who returned usable questionnaires. The percentages of responses by groups according to demographic independent variables employed in the study, are summarized in Chapter V.

DATA ANALYSIS

Coding

Data from the questionnaire returns were coded by the researcher onto the transcript columns of the questionnaires. A five percent sample of the questionnaire was checked independently by another coder for possible errors. The data were finally punched onto 80-column IBM cards for [illegible] analysis by the computer. The Statistical Package for Social Sciences (SPSS) program [illegible]

Table 1

Distribution and Return of Questionnaires by [illegible] sities

[illegible]	Total Subjects	Number of Returns	Percentage of Total Subjects	Total Usable* Return	Percentage of Total Subjects
[illegible] British Columbia	13	12	92.30	9	69.23
[illegible]	10	10	100.00	10	100.00
[illegible]	4	3	75.00	3	75.00
[illegible]	12	11	91.67	9	75.00
[illegible]	13	12	92.30	12	92.30
[illegible] Ontario	13	13	100.00	12	92.30
[illegible]	11	10	90.91	8	72.72
[illegible]	8	6	75.00	6	75.00
[illegible]	16	14	87.50	12	75.00
[illegible]	12	11	91.67	10	83.33
[illegible]	6	4	66.67	3	50.00
	118	106	89.83	94	79.66

*[illegible] refers to the extent to which the questionnaires were completed in sufficient detail to provide [illegible] information with regard to the demographic characteristics and the research variables; and returned [illegible] the deadline date to be included in the data analysis.

experience, number of publications and presentations at scientific meetings were grouped as shown in Chapters V and VI.

Section II - job facet importance and satisfaction. This section deals with the numerical values assigned to both the "importance" and "satisfaction" dimensions of the job facets on the questionnaire. In order to be consistent with the conceptual framework, for each job facet on the questionnaire the numerical rating assigned to the item by each respondent was transformed; a +3 for highly satisfied (6), +2 for moderately satisfied (5), +1 for slightly satisfied (4), 0 for neutral or "not applicable" (0), -1 for slightly dissatisfied (3), -2 for moderately dissatisfied (2), and -3 for highly dissatisfied (1).

In the case of an omission in the satisfaction item a neutral response of "0" was inserted. For any omission in the importance dimension, a response of 1, "unimportant" was inserted. The numerical rating for each checked job facet on the satisfaction scale was multiplied by the corresponding numerical rating on the "importance" scale to obtain the weighted satisfaction measure.

The Overall Satisfaction: The overall satisfaction (JS) for each respondent was derived from the sum of the weighted facet satisfactions, that is, the sum of the product of each job facet importance (JFI) and job facet satisfaction (JFS).

$$JS = \sum_{} JFI \times JFS$$

For computation and further analytical purposes, three other measures [illegible] with the instrument. One measure [illegible]

The second other measure is a one-item measure based on the response to the facet-free question, "on the whole, how satisfied are you with your job as an educator?" The third other measure is the one item measure weighted by the perceived importance of one's work in one's programme.

In order to establish the extent to which the proposed measure of overall satisfaction for this study compares favourably or unfavourably with the other three measures of overall job satisfaction, the Pearson product-moment correlation coefficients were computed using the Statistical Package for Social Sciences program (Nie et al., 1975). The following steps were followed:

(1) The unweighted facet-free (FFS) index of overall satisfaction was obtained from the responses to questionnaire item #48.

(2) The weighted facet-free (FFS x FFI) index of overall satisfaction was obtained from the product of the responses to questionnaire items #48 and #49.

(3) The second unweighted overall job satisfaction (JFS) index was obtained by averaging each respondent's ratings of satisfaction on the 31 job facets on the questionnaire.

(4) The final index (JFS x JFI) was obtained from the average of the ratings of satisfaction weighted by importance on the 31 job facets on the questionnaire.

To determine the extent to which the final index provided an equal or approximate estimate of overall satisfaction as the other three indices, Pearson product-moment correlation coefficients were computed. Table 1 shows the results of the statistical analysis. In accordance with Garrett's (1966:376) interpretation of correlation all the obtained

Table 2

Pearson Product-Moment Correlations Between Four Methods of Using Importance and Satisfaction Ratings as Indices to Predict Overall Job Satisfaction

N = 94

	FFS	FFS x FFI	JFS	JFS x JFI
FFS	1.00	.95	.63	.64
FFS x FFI	.95	1.00	.62	.64
JFS	.63	.62	1.00	.98
JFS x JFI	.64	.64	.98	1.00

Note: All correlations were significant at .001 level (and rounded to two decimal places)

correlation coefficients denote substantial or marked relationships with one another. They are all different from zero at the .001 level. The correlations between the facet-related indices (JFS and JFS x JFI) appear to be higher than those of facet-free indices.

The high positive correlation (r = .98) between the two facet-related indices indicated that they were measuring the same thing. Even though the importance-weighted facet satisfaction measure did not correlate significantly better with the facet-free measures than the unweighted facet satisfaction measure, at least the importance-weighted measure did not provide a poorer estimate. Since the importance weighted measure was more consistent with the conceptual framework for this study and more theoretically appealing to the researcher, it was decided

as a suitable measure to employ in the study.

Analysis of Variance: In the section of this study where the major focus was a comparison of the job satisfaction of sub-groups of educators formed on their demographic variables, extensive use has been made of descriptive statistics such as means, standard deviations, frequencies and percentage frequencies. Where comparisons among sub-groups have been made which involved non-directional hypotheses, a decision was made to accept or to reject the null hypothesis at the .05 level of significance. One statistical procedure used in testing the statistical differences between the sub-groups was the one-way analysis of variance.

Since most of the independent variables were nominal data, and the dependent variables were in interval scale, the F and t tests were used in the analyses. According to Ferguson (1971:27)

> . . . where the treatment, or independent variable is nominal the analysis of the data cannot be extended beyond the F test applied to the group means and the comparison of means either two at a time or in sub-groups.

In this study, F test was used for all inter-group comparisons. Where F was found to be significant beyond the .05 level, the nature of the implied difference was sought further through the application of the Scheffé method of multiple comparisons. In the use of parametric tests such as F and t tests, certain assumptions are implied: (1) random sampling (2) variables under study are randomly distributed (3) there is an homogeneity of variance (4) the contribution of the factors to the total variance is additive. In view of the high rate of return and the wide variation in the responses, it seemed reasonable to assume that the random sampling had been met and that the variables under study

were normally distributed.

The Scheffé method of multiple comparisons is concerned with the probability of rejecting the null hypothesis when it is true, a Type 1 error. This method has been described by Ferguson (1971:271) as more rigorous than other multiple comparison methods with regard to Type 1 error. Among other advantages of this method according to Ferguson (1971:271) is that it is not seriously affected by violations of the assumptions of normality and homogeneity of variance, unless these are gross. Ferguson (1971:271) suggested that since the rigorous nature of the Scheffé procedure will lead to fewer significant results the investigator may choose to follow Scheffé's recommendation to employ a less rigorous significance level of .10 instead of .05. This suggestion was followed.

Factor Analysis: The Importance and Satisfaction components were subjected to factor analysis in order to identify those factors which accounted for a large percentage of the variation among the educators in Rehabilitation Medicine. The procedure employed is explained in detail in Chapter VII.

Section III - the open-ended narrative responses. The statements provided by the respondents were subjected to content analysis, and classified according to the scheme provided by Herzberg et al. (1959). The following categories were used to classify the job aspects which the respondents personally identified as the critical incidents that contributed to their feelings of exceptional satisfaction or dissatisfaction. Abstracts of the critical incidents have been included in Appendix C.

1. Achievement - This includes all references to the presence or absence of: personal feeling of accomplishment, professional growth (without change in status), scholarly work or publication, and student success.

2. Recognition - Included under this are references made with regard to presence or lack of it, of praise, commendation, nominations, award (from others including superiors, peers, students, relevant others) for the work done.

3. Advancement - Under this category were all references made with regard to a feeling of growth or lack of it on the job which brought about a change in status such as promotion, and academic tenure.

4. Responsibility - This includes all statements indicating satisfaction or dissatisfaction arising from the respondent's own exercise of authority and control over people or things, gain or loss of autonomy and independent action, and being accountable for own behaviour or those of others.

5. Work Content - Under this category were coded all positive and negative references regarding the extent to which the work is important, stimulating, variable, challenging, utilizes the skills or ability, and represents necessary or unnecessary busy work.

6. Work Context - This contains all positive and negative statements relating to the physical conditions, resource adequacy, the location, the work load, the amount of work relative to the time available.

7. Inter-personal Relations with Colleagues - Under this category are all references to the way co-workers (colleagues) get along

with each other, presence or absence of help, cooperation, and communication.

8. Inter-personal Relations with Students - Any reference to getting along or not getting along with students and obtaining or not obtaining student cooperation was coded here.

9. Policies and Administration - This contains all references relating to academic policy implementation, quality of leadership, delegation, consultation, supportiveness of and communication with administrators.

10. Reward System - Under this category were coded all references to salary, pay relative to amount of work, merit awarded or denied, justice or injustice in the institution's remuneration.

11. Constraints in Personal Life - All references with regard to subtle pressures, expectations and demands on the job that affected the respondent's personal life or philosophy were coded here.

The frequency counts of the occurrence of events in individual categories were computed. A chi-square analysis was used to find the significance of differences among the proportion of events that fell into different categories, followed by a t-test to determine the level of significance.

Chapter V

ANALYSIS OF DEMOGRAPHIC DATA OF RESPONDENTS

Questionnaire data on the demographic characteristics of the respondents are reported in this chapter. Column counts were run on the demographic data provided by the respondents. A wide range was evident on each of the variables classified as personal, organizational, professional and mobility characteristics. These characteristics are grouped and reported below.

PERSONAL CHARACTERISTICS

Table 3 contains data which show the frequency and percentage distribution of respondents on the independent variables classified as personal characteristics.

Sex

Since physical and occupational therapy are "traditionally female" professions it was not surprising that there were almost four times as many females as males among the respondents. Of the respondents, 78.7 percent (74) were females and 21.3 percent (20) were males.

Age

Approximately 43 percent of the respondents were under 40 years of age, 32 percent reported their ages as 40-49, and almost 26 percent

Table 3

Personal Characteristics of Respondents

Characteristic	Respondents	
	Frequency	Percentage
Sex		
Female	74	78.7
Male	20	21.3
Total	94	100.0
Age		
Under 40	40	42.6
40 - 49	30	31.9
50 and over	24	25.5
Total	94	100.0
Academic Qualification		
Undergraduate Professional degree	23	24.5
Teaching Certificate - No graduate degree	22	23.4
Master's Degree	44	46.8
Doctoral Degree	5	5.3
Total	94	100.0

were 50 years of age or older.

Academic Qualifications

In view of the fact that there is a continued increase in the pursuit of higher education through part-time programs, the academic qualification for the respondents was not measured by the number of years of post secondary education as is the usual practice. Instead their academic qualification was based on the highest degree or diploma attained by the respondents at the time of the study.

Among the respondents approximately one-quarter (24.5 percent) indicated that their highest academic qualification was an undergraduate professional degree in physical and/or occupational therapy. Those who had teaching certificates in addition to their basic professional qualifications constituted 23.4 percent. Almost half of the total respondents (46.8 percent) had a Master's degree. Five respondents (5.3 percent) had Doctorates.

ORGANIZATIONAL CHARACTERISTICS

The frequency distributions of the respondents on the variables classified as organizational characteristics are tabulated in Table 4.

Academic Rank

The data on the respondents' academic ranks in their different universities provided four sub-groups. Approximately 18 percent of the respondents held academic ranks lower than assistant professor, while 44.7 percent held the rank of assistant professor. Thirty-three percent of the respondents were Associate professors while 4.2 percent were professors.

Table 4

Frequency and Percentage Distributions of Respondents Based on Their Organization Characteristics

Characteristic	Respondents	
	Frequency	Percentage
Academic Rank		
Below Assistant Professor Rank	17	18.1
Assistant Professor	42	44.7
Associate Professor	31	33.0
Professor	4	4.2
Total	94	100.0
1979/80 Salary		
$21,000 or less	19	20.2
$21,001 - $27,000	38	40.4
$27,001 - $33,000	24	25.6
Over $33,000	13	13.8
Total	94	100.0
Area of Primary Involvement		
Predominantly Administration	11	11.7
Predominantly Teaching	34	36.2
Combination of All Academic Responsibilities	49	52.1
Total	94	100.0

Salary

From the data provided by the respondents four sub-groups were formed based on their income levels. From Table 4, it can be noted that one-fifth (20.2 percent) of respondents reported that their salary for the 1979/80 academic year was $21,000 or less. Two-fifths of the respondents (40.4 percent) reported a salary between $21,001 and $27,000. Of the remainder, 25.6 percent reported that their salary was between $27,001 and $33,000, while 13.8 percent reported a salary higher than $33,000 in the 1979/80 academic year.

Area of Primary Involvement

The data here provided a measure of the proportionate distribution of the respondents' time to specified tasks on their jobs. Essentially the idea was to identify the area of highest commitment of time on the job.

Of all respondents, 11.7 percent indicated that they spent more than two-thirds of their time in administration and administration related duties, while 36.2 percent indicated that they spent more than two-thirds of their time on the job in teaching. The remainder, 52.1 percent, had their time spent almost evenly on teaching, research, other university activities and some administrative responsibilities.

PROFESSIONAL CHARACTERISTICS

Years of Experience

In Table 5 are reported the frequency percentage distributions of respondents according to their years of teaching experience in their

Table 5

Professional Characteristics of Respondents Based on Years of Teaching Experience

Number of Years	In Present Department		In Canada		In Entire Career	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
1 - 2	17	18.1	17	18.1	17	18.1
3 - 5	19	20.2	16	17.0	15	16.0
6 - 9	20	21.3	20	21.3	21	22.3
10 and over	38	40.4	41	43.6	41	43.6
Total	94	100.0	94	100.0	94	100.0

present employment, years of experience in teaching Rehabilitation Medicine in Canada, and total years of experience in teaching in their entire professional career. The subdivisions were chosen to reflect the usual period of probation, the periods when individuals usually began to expect promotion and tenure, and the consolidation periods in an employment.

Publications and Presentations

The professional characteristics of the respondents based on their proven ability to publish refereed articles and make presentations in scientific meetings in the last five years are presented in Table 6.

Table 6

Professional Characteristics of Respondents Based on Their Publications and Scientific Presentations

Number of Papers	Publications		Presentations	
	Frequency	Percentage	Frequency	Percentage
None	49	52.1	33	35.1
1 - 2	21	22.3	27	28.7
3 and over	24	25.5	34	36.2
Total	94	100.0	94	100.0

More than half of the respondents, 52.1 percent, reported that they had no publications, 22.3 percent had one or two publications and 25.5 percent had at least three publications. The range in the publication variable was high from 0 to 33. The highest publisher among the respondents reported 33 publications when the next three highest publishers had 14, 10, and eight respectively.

With respect to presentations at scientific meetings, almost two-thirds of the respondents (64.9 percent) reported that they had read papers at scientific meetings in the last five years. The number of such presentations ranged from 0 to 50, with 28.7 percent of respondents reporting one or two papers, while 36.2 percent had read at least three papers in the last five years. Although the highest presentor had 50 presentations, the next three highest presentors had 15, 12, and 10, respectively.

MOBILITY CHARACTERISTICS

Three measures were used to ascertain the extent of intra-professional, interorganizational mobility among educators in Rehabilitation Medicine in Canada:

(1) The number of schools/departments in which the respondent had been employed in a full-time academic position (Questionnaire item 8).

(2) How long the respondent intended to remain with the present employer (Questionnaire item 12).

(3) The number of letters of enquiry the respondent had sent to potential employer(s) since January 1979 (Questionnaire

item 13).

The figures for the respective measures are shown in Table 7.

Table 7

Mobility Characteristics of Respondents

Characteristics	Respondents	
	Frequency	Percentage
Mobiles	26	27.7
Non-mobiles	68	72.3
Total	94	100.0

Through the use of the SPSS programme it was possible to extract the figures in the three measures such that each mobile educator was included once only. The combination showed that 27.7 percent belonged to the mobile group while 72.3 percent were grouped as non-mobile (stable).

Respondents who indicated that they had either moved or had reached a point at which they would like to move were asked to rank-order 15 job-related items to the extent that they contributed to their decision to move. The detailed analysis of their responses is presented in Chapter VII.

SUMMARY

The demographic data gathered from the respondents were analyzed to determine the characteristics of educators in Rehabilitation Medicine participating in the study. The characteristics were grouped as personal, organizational, professional and mobility categories.

The subjects consisted of full-time faculty members in Physical and Occupational Therapy programs in 11 Canadian universities. Of the 94 subjects, 40.4 percent were from Occupational Therapy, 54.3 percent were from Physical Therapy and 5.3 percent had responsibilities in both Physical and Occupational Therapy programs. Grouped by sex, there were almost four times as many female respondents as males.

Both the mean and median age group for the respondents was 40 - 49 years. More than half the respondents had graduate degrees. The highest percentage (44.7 percent) of the respondents held assistant professor ranks in 1979/80, while 35 percent held academic ranks above assistant professor. Both the mean and the median salary scale for 1979/80 academic year for this group were in the $24,000 - $27,000 range.

Although the number of years in the present employment ranged from one year to 37 years, the mean length of employment with the present employer was 8.8 years with a median of 7.5 years. With regard to the total years of teaching experience, it ranged from one year to 41 years, with a mean of 10 years and a median of 8.6 years.

On the two indicators of scholarly productivity, more than half (52.1 percent) of the respondents had had no publication in the last five years, while more than one-third (35.1 percent) of the respondents had not presented papers in scientific sessions in the last five

years. Classified according to their mobility characteristics, a large proportion (72.3 percent) of respondents had remained employed in only one university in Canada and had never taught in a program in any other university in Canada.

Chapter VI

ANALYSIS OF DATA: JOB FACETS, JOB ASPECTS AND JOB SATISFACTION

This chapter contains the report of statistical analyses carried out to determine the extent to which educators in Rehabilitation Medicine in Canada experienced overall satisfaction on their job, and to determine the job facets which contributed to their feeling of overall satisfaction. Reported in this chapter also are the relationship between facet importance and facet satisfaction, the relationship between facet importance and overall satisfaction and a test to determine whether the factors which determine job satisfaction are separate from the factors which determine job dissatisfaction.

This chapter follows the order of research questions 1 and 2 that were presented in Chapter I.

PROBLEM 1: OVERALL JOB SATISFACTION

Sub-problem 1.1

"To what extent do educators in Rehabilitation Medicine in Canada currently experience overall job satisfaction?"

Two indices were used in determining the level of overall job satisfaction experienced by the respondents. They were: the facet free one-item rating, and the mean value obtained from the sum of, the product of the job facet importance and the job facet satisfaction. The facet

free one-item rating produced a mean of 5.12 which corresponded to the response category cued verbally as moderately satisfied. Using the transformed scores the second index produced a mean overall satisfaction score of 6.45.

On the whole there were no job facets on which all respondents were satisfied, nor was there a facet on which all respondents were dissatisfied. The percentage frequency distribution of the respondents on all 31 job facets in the questionnaire is provided in Table 49 which is included in Appendix D. When the response categories "highly satisfied," "moderately satisfied," and "slightly satisfied," were combined, it was found that at least 90 percent of the respondents reported satisfaction with seven of these job facets. The seven job facets are shown in Table 8.

Table 8

Seven Job Facets on Which the Highest* Percentages of Satisfaction Were Reported

Job Facet	Mean	Percentage Satisfied
Freedom to select the subject matter for courses taught	5.62	96.8
The provision for sick leave	5.54	94.7
Relationship with students	5.34	94.7
Opportunity to use own initiative	5.18	92.6
Opportunity to use own knowledge and skill	5.11	91.5
Intellectual stimulation in work	4.96	90.4
Feeling of achievement as an educator	4.85	90.4

* Only facets with more than 90 percent of respondents satisfied are reported.

On the other hand, by collapsing the response categories "slightly dissatisfied," "moderately dissatisfied," and "highly dissatisfied," it was observed that there were nine job facets on which at least 20 percent of the respondents were dissatisfied. Those job facets are shown in Table 9.

Table 9

Nine Job Facets on Which the Highest* Percentages of Dissatisfaction Were Reported

Job Facet	Mean Score	Percentage Dissatisfied
The physical conditions of your classrooms and laboratories	3.86	39.4
The use of research and publications in determining salary increments	3.82†	31.9
The status accorded to educators in your profession within your university	3.99†	30.9
Opportunity to do research	3.87†	30.9
Methods used to determine faculty promotion and tenure	4.03†	29.8
The policies regulating sabbatical leave	4.26†	27.7
The number of non-teaching duties performed	4.19†	27.7
The time available for lecture preparations	4.31†	25.5
Your participation in decision making process in your school/department	4.56	20.2

* Only job facets with at least 20 percent of respondents dissatisfied are reported.

† Job facets on which the N varied due to "not applicable" responses.

It was observed that the distribution of respondents was skewed toward the "satisfied" end of the scale. The presence of "not applicable"

responses makes the "satisfied" plus "dissatisfied" on some facets not equal to 100.0 percent. Therefore, extremes are reported here to emphasize those job facets which had fairly clear agreement among the respondents resulting in 16 out of 31 job facets which appeared in Tables 8 and 9.

Sub-problem 1.2

"What job facets are identified as contributing significantly to the feeling of overall job satisfaction?"

In order to examine the above research question, a stepwise multiple regression procedure was used to determine the job facets (that is, predictor variables) which were associated with the greatest percentage of variance in overall job satisfaction for the respondents. The stepwise multiple regression procedure was stopped when the entry of subsequent predictor variables failed to account for more than two percent of variance.

The job facets, the significance of each of the facets, the cumulative percentage of variance and the percentage of variance accounted for by each job facet are presented in Table 10. The seven job facets together accounted for 90.1 percent of the total variance.

Sub-problem 1.3

"What job facets are identified as most important to the feeling of overall job satisfaction?"

To examine the above research question, the mean importance attached by the respondents to each of the 31 job facets on Section II of the questionnaire was calculated using the Statistical Package for the Social Sciences (SPSS) program (Nie et al., 1975). A job facet

Table 10

Stepwise Multiple Regression Analysis Using the 31 Job Facets with Overall Job Satisfaction

Criterion Variab'	Predictor Variables	Increase in Prediction		Percentage of Variance	
		F	p	Cumulative	Individual
Overall Job Satisfac-tion	Opportunity to use your knowledge and skill	37.47	.0000	45.0	45.0
	The number of non-teaching duties performed by you	66.25	.0000	64.8	19.8
	The status accorded to edu-cators in your profession within your university	52.21	.0000	74.9	10.1
	The sense of responsibility of the students	38.54	.0000	81.3	6.4
	The methods used in determ-ining faculty promotion and tenure	44.63	.0000	85.2	3.8
	Opportunity for professional growth	26.35	.0000	87.6	2.4
	Your freedom to select the subject matter for your courses	20.87	.0000	90.1	2.4

was regarded as most important if its mean importance rating could be rounded to 5.0.

Summarized in Table 11, in descending order of magnitude of their importance, are nine job facets which the respondents identified as most important to their feeling of satisfaction with their job.

Table 11

Job Facets Identified as Most Important to the Feeling of Satisfaction on the Job

Job Facet	Mean Importance Rating*
Freedom to select the subject matter of courses taught	4.76
Opportunity to use initiative	4.70
Opportunity to use own knowledge and skill	4.69
Intellectual stimulation in work	4.69
Relationship with students	4.65
Feeling of achievement as an educator	4.60
Availability of library and A/V resources	4.60
Opportunity for professional growth	4.59
Assignment to teach particular courses	4.52

* Maximum rating = 5.0

Sub-problem 1.4

"What is the relationship between overall job satisfaction and the importance of the job facets?"

In order to ascertain the relationship between the importance ratings of the job facets and the index of overall job satisfaction,

Pearson product-moment correlation coefficients were computed between the overall job satisfaction index and the following measures: the mean job facet importance, the mean job facet satisfaction and the mean importance-weighted job facet satisfaction. The obtained correlation coefficients are shown in Table 12.

Applying Garrett's (1960:176) interpretation of coefficients to the results in Table 12, five out of 31 correlation coefficients between overall job satisfaction and importance had values between .20 and .37 which indicate low or slight relationship. The remaining 26 correlation coefficients were less than .20 which denotes indifferent or negligible relationship. On the other hand, each of the 31 correlation coefficients between overall job satisfaction and the unweighted job facet satisfactions was above .20.

However, the correlation between overall job satisfaction and each of the unweighted job facet satisfactions was not appreciably improved by the addition of the importance measure except on three job facets, namely "provision for sick leave," "prospect of comfortable retirement," and "feeling of job security." In other words, the correlation coefficient obtained with importance weighted job facet satisfaction was not in most cases, appreciably different from that obtained with the unweighted job facet satisfaction as shown in Table 12.

Sub-problem 1.5

"What is the relationship between job facet importance and job facet satisfaction for this group of educators?"

To test this relationship the means of the scale values of both Importance and Satisfaction on the 31 job facets were computed. Using

Table 12

Comparison of Correlations Between Overall Job Satisfaction and Job Facet Importance, Job Facet Satisfaction and Weighted Job Facet Satisfaction

Job Facet	Correlation with Overall Job Satisfaction		
	Importance	Satisfaction	Satisfaction x Importance
Salary	.133	.347	.335
Promotion and tenure procedures	.170	.582	.558
Research and publications in salary increments	.022	.400	.431
Sabbatical leave policies	.174	.398	.381
Provision for sick leave	.322	.351	.413
Prospects of comfortable retirement	.367	.431	.517
Feeling of job security	.359	.328	.407
Number of hours of teaching	.177	.438	.444
Time available for lecture preparation	.117	.381	.413
Number of non-teaching duties	.001	.579	.567
Assigned course to teach	.060	.300	.293
Freedom to select subject matter of course taught	.004	.204	.219
Availability of library and A/V resources	.140	.518	.519
Classroom and lab conditions	.165	.587	.602
Availability of useful advice	-.105	.648	.627
Relationship with administrator(s)	.177	.377	.431
Congeniality of professional colleagues	-.014	.573	.534
Relationship with students	.086	.441	.435
Opportunity to help others find success	.233	.507	.513

Table 12
(Cont'd.)

Job Facet	Correlation with Overall Job Satisfaction		
	Importance	Satisfaction	Satisfaction x Importance
Sense of responsibility of students	.083	.321	.320
Minimum acceptable student achievement	.043	.445	.470
Status accorded to therapy educators	.092	.582	.592
Feeling of achievement	.152	.645	.655
Recognition of own work	.093	.440	.455
Intellectual stimulation in work	.053	.532	.535
Opportunity for professional growth	-.145	.556	.555
Opportunity to do research	-.088	.593	.600
Opportunity to use initiative	.163	.580	.587
Opportunity to use knowledge and skill	.204	.670	.671
Participation in decision making	.141	.371	.360
Opportunity to do socially significant tasks	.119	.454	.455

the mean scores in each dimension, the job facets were rank ordered from high to low on the basis of the mean values of importance, and then on the mean values of satisfaction. The rank-order correlation was calculated as suggested by Guilford (1936:339) using the SPSS program.

Table 13 illustrates the results of the statistical procedure. The rank-order correlation (rho = .55) was significant at the .001 level. In other words, there was a substantial positive relationship between the relative amount of importance the respondents attached to the given facets and the relative amount of satisfaction they felt toward the given facets.

Sub-problem 1.6

"Are the satisfying and dissatisfying facets consistent with the motivator-hygiene theory of job satisfaction described by Herzberg et al. (1959)?"

An examination of the frequency run on the respondents' responses to the 31 job facets in Section II of the questionnaire showed that there were no job facets on the questionnaire which could be described as either totally satisfying or dissatisfying. The purpose of the above research question was to investigate whether or not the job facets judged to be motivators were associated with significantly higher levels of satisfaction than the job facets judged to be hygienes.

In accordance with Herzberg's classification, 12 of the 31 job facets were judged to be items intrinsic to the job and for analysis, were categorized as "motivators." These were item numbers 27, 28, 35, 39, 40, 41, 42, 43, 44, 45, 46 and 47 on the questionnaire. The remaining 19 items on Section II of the question were deemed extrinsic to the

Table 13

Rank Order Correlation of Paired Mean Scale Values of Importance and Satisfaction on 31 Job Facets

Item	Importance $\bar{x}$ Score	Satisfaction $\bar{x}$ Score	Importance Rank	Satisfaction Rank
Salary	3.56	4.74	29	17
Promotion and tenure procedures	3.94	4.03	24	27
Research and publications in salary increments	3.47	3.82	30	31
Sabbatical leave policies	3.85	4.26	26.5	25
Provision for sick leave	3.69	5.54	28	2
Prospects of comfortable retirement	3.89	4.83	25	14.5
Feeling of job security	4.04	4.71	21	18.5
Number of hours of teaching	4.02	4.71	22	18.5
Time available for lecture preparation	4.25	4.31	16	24
Number of non-teaching duties	3.85	4.19	26.5	26
Assigned course to teach	4.52	5.13	9	5
Freedom to select subject matter of course taught	4.76	5.62	1	1
Availability of library and A/V resources	4.60	5.01	6.5	7
Classroom and lab conditions	4.15	3.86	18	30
Availability of useful advice	4.28	4.67	15	20
Relationship with administrator(s)	4.29	4.77	14	16

Table 13
(Cont'd.)

Item	Importance $\bar{x}$ Score	Satisfaction $\bar{x}$ Score	Importance Rank	Satisfaction Rank
Congeniality of professional colleague	4.31	4.97	13	9
Relationship with students	4.65	5.34	5	3
Opportunity to help others find success	4.14	4.99	19	8
Sense of responsibility of students	4.48	4.84	10	12.5
Minimum acceptable student achievement	4.43	4.84	11	12.5
Status accorded to therapy educators	4.12	3.99	20	28
Feeling of achievement	4.50	4.85	6.5	11
Recognition of own work	3.96	4.67	23	21
Intellectual stimulation in work	4.69	4.96	3.5	10
Opportunity for professional growth	4.59	4.65	8	22
Opportunity to do research	4.20	3.87	17	29
Opportunity to use initiative	4.70	5.18	2	4
Opportunity to use knowledge and skill	4.69	5.11	3.5	6
Participation in decision making	4.38	4.56	12	23
Opportunity to do socially significant tasks	3.46	4.83	31	14.5

* Rho = .55, significant at .001

job and were categorized as "hygienes."

To examine the research question, the following statistical procedures were followed:

(i) The mean score on the motivator items was computed.

(ii) The mean score on the hygiene items was computed.

(iii) By means of a t-test, the difference between the two means was examined for significance.

The results of the statistical analyses are presented in Table 14. Further analysis was carried out on the importance of the "motivators" together compared to the importance of the "hygienes" together.

Table 14

Comparison of the Mean† Satisfaction Scores on Hygiene Items and Motivator Items on the Questionnaire

Category	No. of Respondents	Mean Scores	Standard Deviations	D.F.	t Value	Probability
Hygienes	94	5.66	3.60	93	-6.53*	.000
Motivators	94	7.70	3.65			

* t.001 at 93 df = ± 3.373; † range = -15 to 15.

A t-value of -6.53 was obtained. This value was significant beyond the .001 level which indicated that there was a significant difference in the mean scores. The mean satisfaction reported on the motivator items together was significantly higher than the mean satisfaction on the hygiene items together; their importance was also significantly higher (t = -6.89), beyond the .001 level.

PROBLEM 2: JOB ASPECT SATISFACTION AND DISSATISFACTION

The purpose of problem 2 was to investigate the job attitudes of educators in Rehabilitation Medicine in Canadian universities as related to the critical incidents on their jobs which they personally identified as contributing to their feeling of satisfaction or dissatisfaction with their jobs. Specifically, two sub-problems were investigated.

Sub-problem 2.1

"What critical incidents were identified by educators in Rehabilitation Medicine in Canadian universities as the sources of satisfaction and dissatisfaction?"

This research question was examined by first carrying out a content analysis of the critical incidents identified by the respondents in the narrative part of the questionnaire in Section III. The procedure followed in the content analysis was described in Chapter IV. After the content analysis a frequency count and percentages were tallied, using the SPSS program, on the job aspects which appeared in the critical incidents narrated by the respondents. Following closely Herzberg's et al. (1959) classificatory scheme, the job aspects which appeared in the critical incidents were also grouped into motivators and hygienes.

Table 15 presents the frequency and percentage distributions of the job aspects identified in the critical incidents which were associated most with the respondents' feelings of satisfaction. "Recognition" was mentioned in 39.5 percent of the satisfying critical incidents. "Achievement" appeared in 30.3 percent, and "content of work" was identified in 13.6 percent of the satisfying incidents. "Interpersonal

Table 15

Frequency and Percentage Distribution of Job Aspects Identified by Respondents in Critical Incidents Contributing to the Feeling of Exceptional Satisfaction

N = 81

Job Aspects		Frequency	Percentage
Recognition	(M)	64	39.5
Achievement	(M)	49	30.2
Content of work	(M)	22	13.6
Interpersonal relationship with students	(H)	12	7.4
Advancement	(M)	8	4.9
Responsibility	(M)	4	2.5
Constraints on personal life	(H)	2	1.2
Context of work	(H)	1	0.6
Total		162*	

Note: The abbreviations M = motivator; H = hygiene.
* Not all respondents provided information on this Section.

relationship with students" was identified in association with the feeling of job satisfaction in 7.4 percent of the total incidents. The remaining job aspects were associated infrequently with the feeling of job satisfaction.

The three job aspects which appeared most frequently in the satisfying critical incidents - "recognition," "achievement" and "content of work" accounted for 83.3 percent of the total job aspects in the satisfying incidents. Two other motivators which were mentioned less frequently, "advancement" and "responsibility" together appeared in 7.4

percent of the incidents. Herzberg classified "relationship with subordinates (students)" as a hygiene factor, even though it operated as a motivator for this group. The findings here tend to show that for job aspects motivators were the chief contributors to job satisfaction for educators in Rehabilitation Medicine.

The job aspects which appeared in the critical incidents narrated by the respondents as contributing to their feeling of exceptional dissatisfaction are summarized in Table 16.

Table 16

Frequency and Percentage Distribution of Job Aspects Identified by Respondents in Critical Incidents Contributing to the Feeling of Exceptional Dissatisfaction

N = 78

Job Aspects		Frequency	Percentage
Context of work	(H)	33	21.3
Policies and administration	(H)	29	18.7
Interpersonal relationship with peers	(H)	22	14.2
Responsibility	(M)	15	9.7
Content of work	(M)	14	9.0
Constraints on personal life	(H)	14	9.0
Reward system	(H)	12	7.7
Achievement	(M)	8	5.2
Interpersonal relationship with students	(H)	4	2.6
Recognition	(M)	3	1.9
Advancement	(M)	1	0.6
Total		155*	

Note: The abbreviations M = motivator; H = hygiene.
* Not all respondents provided information on this Section.

The three job aspects which were mentioned most frequently were "context of work" (21.3 percent), "policies and administration" (18.7 percent) and "interpersonal relationship with peers" (14.2 percent). By Herzberg's classification, these job aspects are extrinsic to the job: they are hygiene factors. Three other hygiene factors, "reward system," "constraint on personal life" and "interpersonal relationship with students" (subordinates) together accounted for 19.3 percent of the dissatisfying critical incidents. However, five job aspects which are intrinsic to the job and are classified as motivators, together accounted for 26.4 percent of the dissatisfying incidents. These were inadequate "responsibility," "content of work," "achievement," "recognition," and "advancement."

The findings here indicate that the hygiene factors contributed in large measure to the feeling of exceptional dissatisfaction to educators in Rehabilitation Medicine in Canada.

Sub-problem 2.2

"Is there any consistency between these incidents and the motivator-hygiene dichotomy of Herzberg et al. (1959)?"

The purpose of this sub-problem was to examine whether or not the job aspects identified in the critical incidents narrated by the respondents as contributing to their feeling of exceptional satisfaction were different from, rather than opposite of, the job aspects identified in the critical incidents narrated as contributing to their feeling of exceptional dissatisfaction.

The following procedures were followed: The frequencies and percentage distribution for each of the job aspects which were identified

in the two parts of the narrative section of the questionnaire were computed and are presented together in Table 17.

Table 17

Frequency and Percentage Distribution of Job Aspects Appearing in Critical Incidents Contributing to Job Satisfaction and Dissatisfaction

Job Aspect		Frequency of Mention			
		As Source of Satisfaction		As Source of Dissatisfaction	
		f	%	f	%
Recognition	(M)	64	20.2	3	0.9
Achievement	(M)	49	15.5	8	2.5
Content of work	(M)	22	6.9	14	4.4
Advancement	(M)	8	2.5	1	0.3
Responsibility	(M)	4	1.3	15	4.7
Interpersonal relationship with students	(H)	12	3.8	4	1.3
Cont[illegible] of work	(H)	1	0.3	33	10.4
Interpersonal relationship with peers	(H)	0	0.0	22	6.9
Policies and administration	(H)	0	0.0	29	9.
Reward system	(H)	0	0.0	12	3.8
Constraints in personal life	(H)	2	0.6	14	4.4
Total		162	51.1	155	48.9

Note: The abbreviations M = motivator; H = hygiene.

The frequency that each job aspect was associated with the time when the respondents felt exceptionally satisfied with their job was tabulated opposite the frequency that the same job aspect was associated with the

time when the respondents felt exceptionally dissatisfied with their job.

The chi-square "goodness of fit" analysis was employed to test the significance of the juxtaposed frequencies and to determine if the job aspects were associated differently with satisfying and dissatisfying critical incidents as presented in Table 18.

Table 18

Chi Square Analysis for Relationship Between the Motivators and Hygienes in the Critical Incidents

Characteristics	Number of Incidents Cited					
	As Sources of Satisfaction		As Sources of Dissatisfaction		Row Total	
	f	%	f	%		%
Motivator	147	90.7	41	26.5	188	59.3
Hygiene	15	9.3	114	73.5	129	40.7
Column Total	162		155		317	

Corrected X^2 = 133.00 df = 1
phi = 0.65 p = 0.0000

A chi-square value of 133.00 was obtained. This value was significant beyond .01 level. A phi coefficient of 0.65 was also obtained which, according to Garlington and Shimota (1964:95), suggested an "intense relationship." These values indicate that job aspects associated with job satisfaction were different from those associated with job dissatisfaction.

Three motivators "recognition," "achievement" and "content of work"

were found to be mentioned significantly more frequently in the satisfying critical incidents than in the dissatisfying critical incidents.

Similarly, the hygiene factors: "context of work," "policies and administration," "interpersonal relationship with peers," "constraints in personal life," and "reward system" were mentioned significantly more frequently in the critical incidents associated with the feeling of exceptional dissatisfaction than exceptional satisfaction.

Taking the motivators as a group and the hygienes as another as shown in Table 18, it was observed that in the critical incidents associated with satisfaction the motivators as a group were identified with a frequency of 90.7 percent while the hygienes as a group were identified in 9.3 percent. On the other hand, hygiene factors were identified in 73.5 percent of the critical incidents associated with job dissatisfaction compared to the identification of motivators as a group in 26.5 percent of the critical incidents.

In summary, these results show that among educators in Rehabilitation Medicine in Canadian universities, motivators were alluded to almost ten times as frequently as hygienes when describing satisfying incidents. Hygienes were alluded to about three times as much as motivators in the description of dissatisfying incidents.

Chapter VII

OVERALL JOB SATISFACTION AND THE DEMOGRAPHIC VARIABLES

Introduction

The data analyses relevant to problems 3 and 4 are reported in this chapter. The purpose of research problem 3 was to determine if there existed in Canadian universities, sub-groups of educators in Rehabilitation Medicine who had different patterns of job satisfaction scores. In the measurement of overall job satisfaction, Weiss (1976:327) recommends that:

> Rather than treat job satisfaction as a global variable, more information is made available for practical use if job satisfaction can be seen in terms of an individual's satisfaction with his pay, his supervision, working conditions, or the amount of variety his job provides.

In the conceptual framework for this study, overall job satisfaction was described as a multi-faceted unitary entity. The researcher adopted Weiss's (1976) recommendation, employing factor analysis in order to reduce the 31 job facets on the questionnaire into smaller, more easily interpretable factors underlying the concept of overall job satisfaction. The factors were used together with the overall satisfaction measures in exploring differences among sub-groups of the respondents. Overall job satisfaction was used in the primary analysis, while the factors were used in the secondary analysis. Tertiary analysis on the job facets produced additional significant results which are included in the summary tables in Appendix E.

Factor Analysis

To determine the underlying factors present in the 31 job facets on the questionnaire, a factor analysis with VARIMAX rotation was performed as recommended by Weiss (1976:355).

Nine factors, all with eigenvalues higher than 1.0 were extracted and they accounted for 69.4 percent of the total variance. The eigenvalues ranged from 7.56 to 1.12. After rotation the nine factors accounted for 40.5 percent, 11.6 percent, 10.9 percent, 9.4 percent, 7.4 percent, 5.8 percent, 5.3 percent, 5.1 percent and 4.0 percent of the common variance respectively. The factors were assigned names which were suggestive of the principal quality that the correlated facets had in common.

Identification of Factors

In naming the factors the following decision rules were established:

1) Items loading .40 or higher were considered to be primary sources of description of the factors, while items loading below .40 were considered as secondary sources.

2) Where any item loaded on more than one factor the meaning of the item was regarded as no longer simple since according to Nie et al. (1975:475) such a variable was measuring "more than one theoretical dimension."

3) Cattell's (1952:336) assertion that "if a loading is not much above 0.50, it is not possible to consider the factor as being highly characterized by that particular variable," was adopted for any item which loaded on two factors. Therefore, any item which loaded on

two factors was considered salient only to the factor where its loading was at or above .50, but the item was not dropped from the second factor on which its loading was at least .40.

4) Items which load on a factor should be subject to meaningful interpretation and should be seen to have a logical fit into the factor in order to contribute to the naming of the factor.

Following the established decision rules, the nine factors were named after independent evaluations by five judges. These judges were almost in complete agreement regarding the names of the factors except for factor six. The complete factor solution is shown in Table 19 to two decimal places. Three items did not load on any of the factors. They were "the salary you receive," "methods used in determining promotion and tenure" and "availability of library and audiovisual resources."

The names of the nine factors and the items loading .40 or higher on the nine factors are shown in Table 20. The descriptions of the nine factors are provided below.

Factor 1: Working conditions. The working conditions in a university are determined, to a large extent, by the number of hours of teaching per week, the time available for lecture preparations, the number of non-teaching duties that faculty members have to carry and the opportunity to carry out some research. The physical conditions of the lecture rooms and laboratories may have some impact on the working conditions.

Factor 2: Content of work. The content of work is described to the extent that it provides opportunities to use one's knowledge and skill, use one's initiative, engage in research, grow professionally and

Table 19

Varimax Factor Solution for 31 Weighted Job Satisfaction Variables Using Nine Factors

Satisfaction Item	Factor and Factor Loadings (× 100)									Communality (× 100)
	1 Working Conditions	2 Content of Work	3 Administration Involvement	4 Benefits	5 Environmental Support	6 Work Ethos	7 Teaching Autonomy	8 Accomplishment	9 Altruism	
Number of hours teaching	80	07	07	-07	07	-00	18	09	-01	70
Time available for lecture preparation	78	06	-00	12	-01	00	01	06	04	64
Number of non-teaching duties performed	58	00	12	25	11	17	06	08	23	53
Physical classroom/lab conditions	40	25	03	13	36	03	03	25	09	44
Opportunity to do research	46	58	07	-02	13	20	-27	-01	03	68
Opportunity to use knowledge and skill	06	86	21	12	12	06	18	15	02	80
Opportunity to use initiative	-05	72	18	11	18	18	14	09	-02	66
Opportunity for professional growth	18	71	-05	06	16	05	-03	-06	22	63
Intellectual stimulation in work	-04	55	04	08	-09	49	30	12	17	70
Participation in decision making	-08	15	89	04	-03	-01	08	03	10	85
Relationship with administrator(s)	21	07	76	03	14	08	01	-02	-07	66
Research and publications in salary increments	11	22	43	13	-08	27	-36	31	-21	51

Table 19

(Continued)

Satisfaction Item	Factor and Factor Loadings (÷ 100)									Communality (÷ 100)
	1 Working Conditions	2 Content of Work	3 Administration Involvement	4 Benefits	5 Environmental Support	6 Work Ethos	7 Teaching Autonomy	8 Accomplishment	9 Altruism	
Policies regulating sabbatical leave	16	00	03	59	08	02	-16	02	11	42
Feeling of job security	02	-00	09	57	-03	23	07	17	05	43
Prospects of comfortable retirement	01	29	05	54	10	01	02	13	24	47
Availability of useful advice as necessary	14	36	26	-03	69	11	-02	12	22	77
Provision for sick leave	10	16	-20	38	47	07	11	11	-00	47
Congeniality of professional colleagues	-04	18	09	02	50	67	07	13	12	79
Minimum acceptable student performance	11	17	03	22	-04	56	16	07	10	45
Status accorded to therapy educators	25	32	10	13	15	40	-35	06	31	61
Assigned course to teach	16	22	05	-09	-00	03	60	25	-09	52
Freedom to select subject matter	05	05	02	06	05	15	59	-02	09	39
Sense of responsibility of of students	-06	-06	01	21	18	06	09	66	00	53
Recognition of own work	25	21	08	-06	-04	09	-08	53	26	48
Relationship with students	03	08	-07	43	23	11	18	52	-03	56

Table 19

(Continued)

Satisfaction Item	Factor and Factor Loadings (÷ 100)									Communality (÷ 100)
	1 Working Conditions	2 Content of Work	3 Administration Involvement	4 Benefits	5 Environmental Support	6 Work Ethos	7 Teaching Autonomy	8 Accomplishment	9 Altruism	
Feeling of achievement	20	39	07	31	-01	15	15	[41]	25	57
Opportunity to help others find success	03	08	-01	25	27	29	15	17	[60]	64
Opportunity to do socially significant tasks	21	19	-10	27	07	13	-02	06	[49]	42
Promotion and tenure procedures	24	08	38	36	20	34	-12	21	-30	63
Availability of library and A/V resources	32	17	20	18	33	-16	-15	16	32	48
Salary	21	15	18	25	-14	-01	01	-08	20	23
Eigenvalues	7.62	2.47	2.30	2.05	1.77	1.50	1.33	1.29	1.18	
Percentage of Total Variance (69.4)	24.6	8.0	7.4	6.6	5.7	4.8	4.3	4.1	3.8	
Percentage of Common Variance (100.0)	40.5	11.6	10.9	9.4	7.4	5.8	5.3	5.1	4.0	

Table 20

Summary of Factors Extracted from the Factor Analysis

Factor	Job Facet Items	Loading	Percentage* of Total Variance
1. Working Conditions	Number of hours of teaching per week	.80	24.6
	Time available for lecture preparation	.78	
	Number of non-teaching duties performed	.59	
	Opportunity to do research	.46	
	Physical classroom/lab conditions	.40	
2. Content of Work	Opportunity to utilize knowledge and skill	.86	
	Opportunity to use initiative	.72	8.0
	Opportunity for professional growth	.71	
	Opportunity to do research	.58	
	Intellectual stimulation in work	.55	
3. Administrative Involvement	Participation in decision making	.89	
	Relationship with administrator(s)	.76	7.4
	Use of research and publication in determining salary increments	.43	
4. Benefits	Policies regulating sabbatical leave	.59	
	Feeling of job security	.57	6.6
	Prospects of comfortable retirement	.54	
	Relationship with students	.43	
5. Environmental Support	Availability of useful advice as necessary	.69	5.7
	Congeniality of professional colleagues	.50	
	Provision for sick leave	.47	

Table 20

(Continued)

Factor	Job Facet Items	Loading	Percentage* of Total Variance
6. Work Ethos	Congeniality of professional colleagues	.68	4.8
	Minimum acceptable level of student performance	.56	
	Intellectual stimulation in work	.49	
	Status accorded to educators in your profession within your university	.40	
7. Teaching Autonomy	Freedom to select subject matter	.59	4.3
	Assignment to teach courses	.60	
8. Accomplishment	Sense of responsibility of students	.66	4.1
	Recognition of your work	.53	
	Relationship with students	.51	
	Feeling of achievement	.41	
9. Altruism	Opportunity to help others find success	.60	3.8
	Opportunity to do socially significant tasks	.49	

* Total variance = 69.4

to the extent that it is not monotonous but a source of intellectual stimulation to the incumbent.

Factor 3: Administrative involvement. This refers to the interaction at work between the faculty member and the administrative personnel in decision making processes and in the assessment and evaluation of the faculty member for salary adjustment.

Factor 4: Benefits. By benefits is meant such fringe benefits as sabbatical leave, feeling of security on the job, a prospect of comfortable retirement as well as a feeling of good relationships with one's students.

Factor 5: Environmental support. An academic environment can be said to be supportive when the educator has easy access to useful advice as necessary, has congenial professional colleagues and provision is made for sick leave.

Factor 6: Work ethos. Work ethos relates to the practices in the academic community which are very much influenced by the congeniality of one's professional colleagues, the acceptable level of student performance, the intellectual stimulation present in the job itself and the social position accorded to the faculty member by others.

Factor 7: Teaching autonomy. This relates to the opportunity to teach in courses of one's interest and specialty as well as an opportunity for freedom of action to select the appropriate subject matter.

Factor 8: Accomplishment. In teaching, accomplishment is a function of the sense of responsibility demonstrated by the products, the amount of recognition shown for the work done, the evidence of good faculty-student relationships and the feeling of achievement.

Factor 9: Altruism. A professional is presumed to be altruistic (Cheek, 1967:11). This relates to the unselfish service provided to other members of the society. In this factor it relates to the extent to which the job provides the opportunity to help others find success and to do socially significant tasks.

PROBLEM 3: OVERALL JOB SATISFACTION AND DEMOGRAPHIC VARIABLES

In dealing with problem 3, sub-groups of subjects were formed based on the data provided by the respondents in section I of the questionnaire which was reported in Chapter V. The mean overall job satisfaction-scores and the mean satisfaction scores on each of the nine factors identified in the factor analysis were computed for the sub-groups. All computations were done using the SPSS program.

One-way analysis of variance was used to compare the mean scores of the different sub-groups on overall job satisfaction and on the factors. Where F value was found to be significant beyond the 0.05 level, the combination of sub-groups which accounted for the resulting differences was sought through the application of the Scheffé multiple comparison of means. The significance level for the Scheffé procedure was set at 0.10. A t-test was used where the mean scores of two groups were compared.

Three sub-problems were investigated under problem 3.

Sub-problem 3.1: Job Satisfaction and Personal Variables

"To what extent are there differences in overall job satisfaction between sub-groups of respondents formed on the basis of their pers-

onal variables?"

Sex. A measure of the mean overall job satisfaction score by sex was obtained from the responses to Section II of the questionnaire. Their mean scores by sex on the nine factors were also computed.

The results of the t-test comparing the two overall job satisfaction mean scores are presented in Table 21.

Table 21

Comparison of the Mean Overall Job Satisfaction Scores of Educators in Rehabilitation Medicine Grouped by Sex

Sex	Number of Respondents	Mean Score	Standard Deviation	Degrees of Freedom	t Value	2-Tail Probability
Female	74	6.13	3.40	92	-1.85	0.067
Male	20	7.65	2.67			

t.05 at 92 df = ± 1.98

The overall job satisfaction mean score for males was higher than that of the females. However, the difference between the two mean scores was not significant at the .05 level. It was concluded that no significant difference existed between the male and female respondents on their overall job satisfaction. The difference between their mean scores on factor 6, Work Ethos, was significant beyond the .05 level. Female respondents were significantly less satisfied than their male counterparts with regard to Work Ethos. The result of this analysis is presented in Table 22.

Table 22

Comparison of the Mean Satisfaction Scores on the Factor of Work Ethos of Educators in Rehabilitation Medicine Grouped by Sex

Sex	Number of Respondents	Mean Score	Standard Deviation	Degrees of Freedom	t Value	2-Tail Probability
Female	74	6.12	5.36	92	-2.27	0.028
Male	20	8.39	3.47			

t.05 at 92 df = ± 1.98

Age. Three age groups were formed comprising those aged under 40, 40-49 and over 49. The frequencies, mean overall job satisfaction scores and standard deviations for the age groups are shown in Table 23. The under-40 group had a lower overall job satisfaction mean score than the 40-49 group and the over-49 group. The mean score for the over-49 group was relatively lower than that of the 40-49 group.

Analysis of variance was used to test the significance of the observed mean differences. An F-value of 0.17 was obtained which was not significant at 0.05 level. It was concluded that there was no significant difference in the mean overall job satisfaction scores of the different age groups of educators in Rehabilitation Medicine in Canada.

Table 24, however, shows that the observed difference in the group mean scores on Factor 9, Altruism, was statistically significant. The F value of 3.40 was significant beyond the .05 level. The applica-

Table 23

Comparison of the Mean Overall Job Satisfaction Scores of Educators in Rehabilitation Medicine Grouped by Age

Age Group	Number of Respondents	Mean Scores	Standard Deviations	F Value	probability
Under 40	40	5.85	3.51	1.17*	0.3156
40 - 49	30	6.91	3.70		
Over 49	24	6.88	2.20		
Total	94	6.45	3.30		

*Note: With df = 2/29, F.05 $\geq$ 3.10

Table 24

Comparison of the Mean Satisfaction Scores on the Factor of Altruism of Educators in Rehabilitation Medicine Grouped by Age

Age Group	Number of Respondents	Mean Scores	Standard Deviations	F Value	probability	Groups Significantly Different[a] 1 2 3
1. Under 40	40	5.74	3.91	3.40*	0.0375	
2. 40 - 49	30	8.23	4.53			†
3. Over 49	24	6.90	3.21			
Total	94	6.83	4.06			

* Note: With df = 2/91, F.05 ≥ 3.10
[a] Scheffé Multiple Comparison of Means set at .10 level
† Groups 1 and 2 significantly different

tion of the Scheffé multiple comparison of means revealed that the under 40 group were significantly less satisfied with the factor of Altruism than the 40 - 49 age group.

Level of education. From the information provided in question 4 on Section I of the questionnaire, the respondents were grouped into three education categories. The first group consisted of those respondents whose highest educational qualification was a baccalaureate degree or less in their professional discipline. The second group comprised respondents who had teaching certificates in addition to their basic professional qualifications. The third group consisted of respondents who had a masters degree. Five respondents who had doctorates were combined with those holding the masters to constitute group three.

The means and standard deviations of the overall job satisfaction score for the three groups are presented in Table 25. The lowest mean score was reported by the baccalaureate group. The group with teaching certificates reported a higher mean score than the group with graduate degrees. When the mean scores were subjected to analysis of variance to test for significant differences, the obtained F value of 3.27 was significant at the .05 level as shown in Table 25. The Scheffé test showed that the overall job satisfaction mean score for the baccalaureate group was significantly less than that of the teaching certificate group.

Further analyses were carried out with regard to the nine factors which underlie overall job satisfaction. A statistically significant difference among means occurred on Factor 1; that is, Working Conditions. The results relating to Factor 1 are presented in Table 26.

Table 25

Comparison of the Mean Overall Job Satisfaction Scores of Educators in Rehabilitation Medicine Grouped by Levels of Education

Level of Education	Number of Respondents	Mean Scores	Standard Deviations	F Value	probability	Groups Significantly Different[a] 1 2 3
1. Baccalaureate	23	5.29	3.23	3.27*	0.0425	
2. Teaching Certificate	22	7.75	2.59			+
3. Masters Degree/ Doctorate	49	6.41	3.46			
Total	94	6.45	3.30			

* With df = 2/91, $F_{.05} \geq 3.10$

Table 26

Comparison of the Mean Satisfaction Scores on the Factor of Working Conditions of Educators in Rehabilitation Medicine Grouped by Levels of Education

Levels of Education	Number of Respondents	Mean Scores	Standard Deviations	F Value	probability	Groups Significantly Different[a] 1 2 3
1. Baccalaureate	23	0.77	6.74	4.15*	0.0189	
2. Teaching Certificate and Professional Qualification	22	5.44	4.40			†
3. Masters Degree/ Doctorate	49	3.98	5.60			†
Total	94	3.53	5.85			

* With df = 2/91, F.05 ≥ 3.10
[a] Scheffé Multiple Comparison of Means set at 0.10 level
† Indicates groups significantly different

There was no statistically significant difference between the teacher's certificate group and the graduate degree group, but the baccalaureate group differed significantly from the other two groups on this variable. Therefore, it was concluded that in Rehabilitation Medicine educators who had only baccalaureates were significantly less satisfied with the working conditions in their respective employments than the rest of their professional colleagues who held higher academic qualifications.

Other significant differences in job facet satisfaction among the sub-groups of educators on the bases of their levels of education are summarized in Appendix E.1.

Sub-problem 3.2: Job Satisfaction and Organizational Variables

"To what extent are there differences in overall job satisfaction between sub-groups of respondents formed on the bases of their organizational variables?"

Academic rank. Three groups of educators in Rehabilitation Medicine in Canadian universities were formed based on their self-reported academic ranks. Table 27 shows the frequency, overall job satisfaction mean scores, and the standard deviations for the various ranks. The lowest overall job satisfaction mean score was reported by the Assistant Professor group. The Associate Professor/Professor group reported the highest overall job satisfaction mean score.

The significance of the difference among the mean scores was tested, using one-way analysis of variance. The obtained F value of 1.63 was not significant at the .05 level. That is, there was no significant difference in the levels of the mean overall job satisfaction among

Table 27

Comparison of the Mean Overall Job Satisfaction Scores of Educators in Rehabilitation Medicine Grouped by Academic Rank

Academic Rank	Number of Respondents	Mean Scores	Standard Deviations	F Value	probability
Below Assistant Professor	17	6.07	3.67	1.63*	0.2023
Assistant Professor	42	5.95	3.79		
Associate Professor/ Professor	35	7.24	2.26		
Total	94	6.45	3.30		

*Note: With df = 2/91, $F_{.05} \geq 3.10$

the various groups of educators in Rehabilitation Medicine based on their academic ranks.

The differences among the sub-groups of educators on the factors underlying overall satisfaction were explored. There was a significant difference found on Factor 4, Benefits. Table 28 shows that the lowest mean score on Benefits was reported by the group below the Assistant Professor rank. The mean scores also increased as the academic rank increased. When one-way analysis of variance was performed an F value of 6.93 was obtained which was significant beyond the .01 level. By applying the Scheffé multiple comparison of means, it was discovered that the Associate Professor/Professor group was significantly more satisfied with Benefits factor than were the other two groups.

Other significant differences in the job facet satisfaction among the sub-groups of educators in Rehabilitation Medicine on the bases of their academic rank are tabulated in Appendix E.

Salary. Four sub-groups of respondents were formed based on their self-reported salary scale for 1979/80 academic year. Table 29 shows that the lowest overall job satisfaction mean score was reported by those educators in Rehabilitation Medicine in Canada who earned $21,000. or less. The job satisfaction mean scores increased as the salary increased such that the highest job satisfaction mean score was reported by those educators whose salary was over $33,000.

The results of a one-way analysis of variance used to test the significance of the observed differences among the four sub-groups are also shown in Table 29. The obtained F value of 5.95 was significant beyond the .01 level, showing that there was a significant difference

Table 28

Comparison of the Mean Satisfaction Scores on the Factor of Benefits of Educators in Rehabilitation Medicine Grouped by Academic Rank

Academic Rank	Number of Respondents	Mean Scores	Standard Deviations	F Value	probability	Groups Significantly Different[a] 1 2 3
1. Below Assistant Professor	17	4.25	4.55	6.93*	0.0016	
2. Assistant Professor	42	5.82	4.93			
3. Associate Professor/ Professor	35	8.75	3.91			† †
Total	94	6.63	4.79			

* With df = 2/91, $F_{.05} \geq 3.10$
[a] Scheffé Multiple Comparison of Means set at 0.10 level
† Indicates groups significantly different

Table 29

Comparison of the Mean Overall Job Satisfaction Scores of Educators in Rehabilitation Medicine Grouped by Salary Scale

Salary Scale	Number of Respondents	Mean Scores	Standard Deviations	F Value	probability	Groups Significantly Different[a] 1 2 3 4
1. $21,000. or less	19	5.38	2.96	5.95*	0.0009	
2. $21,001 - $27,000.	38	5.51	3.73			
3. $27,001 - $33,000.	24	7.33	2.49			
4. Over $33,000.	13	9.13	1.61			† †
Total	94	6.45	3.30			

* With df = 2/91, F.05 = 3.10; F.01 = 4.85
[a] Scheffé Multiple Comparison of Means set at 0.10 level
† Indicates groups significantly different

in the levels of overall job satisfaction among the sub-groups of educators based on their salary.

Scheffé's multiple comparison of means was used to identify the sub-groups which were different. It was found as shown in Table 29 that the overall job satisfaction mean score for those educators whose salary was $21,000. or less, was significantly lower than the mean score for those educators whose salary was over $33,000. The overall job satisfaction mean score for the $21,001. - $27,000. group was also significantly lower than the mean score for the educators whose salary was over $33,000. Therefore, it was concluded that the two sub-groups of educators whose salaries were below $27,000. had significantly lower overall job satisfaction than those educators whose salary was over $33,000. The overall satisfaction mean score of the group whose salary was $27,001. - $33,000. was not significantly different from those of the other three groups.

Secondary analyses showed that there were significant differences among the sub-groups on two of the nine job satisfaction factors, namely Benefits and Altruism

Factor 4: Benefits. With regard to Benefits, it was observed that the satisfaction mean scores for this factor increased as the salary scale increased such that the highest mean score was reported by the sub-group of educators whose salary was over $33,000. The results of a one-way analysis of variance to test the significance of the observed differences among the mean scores are presented in Table 30. An F value of 6.93 was obtained and it was significant beyond the .01 level.

When Scheffé's multiple comparison of means was applied it was found that no significant difference existed in the mean satisfaction

Table 30

Comparison of the Mean Satisfaction Scores on the Factor of Benefits of Educators in Rehabilitation Medicine Grouped by Salary Scales

	Benefits Satisfaction					
Salary Scale	Number of Respondents	Mean Scores	Standard Deviations	F Value	probability	Groups Significantly Different[a] 1 2 3 4
1. $21,000. or less	19	4.51	4.30	6.93*	0.0003	
2. $21,001. - $27,000.	38	5.51	4.48			
3. $27,001. - $33,000.	24	7.74	5.00			
4. Over $33,000.	13	10.90	2.58			† †
Total	94	6.63	4.79			

* With df = 3/90, F.05 ≥ 2.71, F.01 ≥ 4.01
[a] Scheffé Multiple Comparison of Means set at 0.10 level
† Indicates groups significantly different

score on this factor among the three groups whose salary was below $33,000. The group whose salary was over $33,000. was significantly more satisfied than the two groups whose salaries were $21,000. or less and $21,001. - $27,000. respectively. It was concluded that educators whose salaries were higher than $33,000. were significantly more satisfied with their fringe benefits than those educators whose salaries were below $27,000.

Factor 9: Altruism. With respect to Altruism, the mean satisfaction score on this factor increased as the salary scale increased such that the lowest mean score was reported by the sub-group of educators whose salary was $21,000. or less while the highest mean score was reported by those whose salary was over $33,000. The F value of 4.21 with the associated probability beyond .01 indicated a statistically significant difference between the means. These are shown in Table 31.

By use of Scheffé's multiple comparison of means, it was found that the group of educators whose salary was $21,000. or less was significantly less satisfied with respect to the factor of Altruism than the group whose salary was above $33,000.

Primary involvement. In order to examine the differences in job satisfaction among educators based on their areas of primary involvement, three groups were formed on the basis of the respondents' reported area of commitment of more than 60 percent of their time on the job. The frequencies, mean scores and standard deviations of the respondents relative to each of the three groups are summarized in Table 32.

Differences existed in the mean overall job satisfaction scores among the three groups. One-way analysis of variance indicated that the

Table 31

Comparison of the Mean Satisfaction Scores on the Factor of Altruism of Educators in Rehabilitation Medicine Grouped by Salary Scales

Salary Scale	Number of Respondents	Altruism Satisfaction Mean Scores	Standard Deviations	F Value	probability	Groups Significantly Different[a] 1 2 3 4
1. $21,000. or less	19	4.76	3.59	4.21*	0.0078	
2. $21,001. - $27,000.	38	6.51	6.51			
3. $27,001. - $33,000.	24	7.52	7.52			
4. Over $33,000.	13	9.50	9.50			†
Total	94	6.83	6.83			

* With df = 3/90, F.05 ≥ [illegible], F.01 ≥ 4.01
[a] Scheffé Multiple Compa[illegible] of Means set at 0.10 level
† Indicates groups significantly different

Table 32

Comparison of the Mean Overall Job Satisfaction Scores of Educators in Rehabilitation Medicine Grouped by Areas of Primary Involvement

Area of Primary Involvement	Number of Respondents	Mean Scores	Standard Deviations	F Value	probability
Administration	11	8.02	1.92	1.514*	0.2256
Teaching	34	6.06	3.01		
Mixed Involvement	49	6.37	3.67		
Total	94	6.44	3.30		

*Note: With df = 2/91, $F_{.05} \geq 3.10$

observed differences among the groups were not statistically significant at .05 level. Therefore it was concluded that there were no significant differences in overall job satisfaction among the group of educators based on their areas of primary commitment of time.

When secondary analyses were carried out to investigate the differences in satisfaction on the nine factors, there was a significant difference in the level of satisfaction expressed by the three groups in relation to Factor 4, Benefits. As shown in Table 33, the predominantly "administration" group had the highest mean score on this factor followed by the predominantly "teaching" group.

Analysis of variance was carried out to compare the differences between the means. An F value of 3.26 was obtained which was significant beyond the .05 level. When the Scheffé multiple comparison of means was applied, it was found that there was a significant difference between the predominantly "administrative" group and the "mixed" group. All other differences were not significant. The conclusion was that the predominantly administrative group were significantly more satisfied with the Benefits than the mixed group.

Years in present employment. From the data provided by the respondents four groups of educators were formed based on the number of years they had spent in their current department/school. The frequencies, mean overall satisfaction scores and standard deviations for the groups are shown in Table 34. Some differences seemed to exist between the means.

A one-way analysis of variance was computed to test the significance of the observed differences in mean overall job satisfaction

Table 33

Comparison of the Mean Satisfaction Scores on the Factor of Benefits of Educators in Rehabilitation Medicine Grouped by Areas of Primary Involvement

Area of Primary Involvement	Number of Respondents	Benefits Satisfaction Mean Scores	Standard Deviations	F Value	probability	Groups Significantly Different[a] 1 2 3
1. Administration	11	9.68	2.88	3.26*	0.04	
2. Teaching	34	6.89	4.49			
3. Mixed Involvement	49	5.76	5.08			†
Total	94	6.63	4.79			

* With df = 3/90, F.05 ≥ 3.10
[a] Scheffé Multiple Comparison of Means set at 0.10 level
† Indicates groups significantly different

Table 34

Comparison of the Mean Overall Job Satisfaction Scores of Educators in Rehabilitation Medicine Grouped by Years in Present Employment

Years in Present Employment	Number of Respondents	Mean Scores	Standard Deviations	F Value	probability	Groups Significantly Different[a] 1 2 3 4
			Overall Job Satisfaction			
1. 1 - 2	17	7.14	3.91	3.04*	0.0332	
2. 3 - 5	19	4.65	3.90			
3. 6 - 9	20	6.14	2.99			
4. 10 and over	38	7.20	2.51			†
Total	94	6.45	3.30			

* With df = 3/90, $F.05 \geq 2.71$
[a] Scheffé Multiple Comparison of Means set at 0.10 level
† Indicates groups significantly different

scores. As shown in Table 34, an F value of 3.04 was obtained which was statistically significant at the .05 level. The application of Scheffé's multiple comparison of means identified that the 3 - 5 years group was significantly less satisfied than the "10 and over" group.

When further analyses were carried out using the nine satisfaction factors, factors 1, 4 and 5 produced significant differences among the groups.

Factor 1: Working conditions. As shown in Table 35, the highest group mean score on this factor was reported by those who had spent no more than two years in their present department. It appeared that satisfaction with this factor was high during the first and second years and for the third to the fifth years, the level of satisfaction was low. From the sixth year onwards, the mean scores on this variable increased as the number of years in employment increased.

One-way analysis of variance showed that the obtained ratio of 2.79 was significant beyond the .05 level. This meant that significant differences existed among the group means. The application of Scheffé's multiple comparison of means revealed that the mean score of the educators in the 3 - 5 year group was significantly less than the mean of the 1 - 2 year group. The respondents who were in their first or second year were significantly more satisfied than the respondents who were in their third to fifth year in their departments or schools. The other observed group differences were not statistically significant.

Factor 4: Benefits. Table 36 shows that from the fifth year onwards, the Benefit satisfaction mean score tended to increase with the respondents' years in employment. The group of respondents who

Table 35

Comparison of the Mean Satisfaction Scores on the Factor of Working Conditions of Educators in Rehabilitation Medicine Grouped by Years in Present Employment

Years in Present Employment	Number of Respondents	Mean Scores	Standard Deviations	F Value	probability	Groups Significantly Different[a] 1 2 3 4
1. 1 - 2	17	6.72	4.52	2.79*	0.0451	
2. 3 - 5	19	1.46	6.14			†
3. 6 - 9	20	2.63	6.94			
4. 10 and over	38	3.62	5.17			
Total	94	3.53	5.85			

* With df = 3/90, $F.05 \geq 2.71$
[a] Scheffé Multiple Comparison of Means set at 0.10 level
† Indicates groups significantly different

Table 36

Comparison of the Mean Satisfaction Scores on the Factor of Benefits of Educators in Rehabilitation Medicine Grouped by Years in Present Employment

Years in Present Employment	Benefits Satisfaction: Number of Respondents	Mean Scores	Standard Deviations	F Value	probability	Groups Significantly Different[a] 1 2 3 4
1. 1 - 2	17	5.72	4.48	4.28*	0.0072	
2. 3 - 5	19	3.83	4.90			
3. 6 - 9	20	6.95	5.00			
4. 10 and over	38	8.26	4.15			†
Total	94	6.63	4.79			

* With df = 3/90, F.05 ≥ 2.71; F.01 ≥ 4.01
[a] Scheffé Multiple Comparison of Means set at 0.10 level
† Indicates groups significantly different

had 10 years and over in present employment reported the highest mean satisfaction score on this factor, while the 3 - 5 year group reported the lowest mean satisfaction score.

One-way analysis of variance was used to test the significance of the observed differences between the means. The obtained F-ratio of 4.28 was significant beyond the .01 level. That is, there was a significant difference in the mean satisfaction reported on the Benefits factor among sub-groups of educators in Rehabilitation Medicine who had spent different numbers of years in their respective departments/schools. Scheffé's multiple comparison of means was used to identify the specific sub-groups which were different. It was found that a significant difference in the mean score existed between those educators who had 3 - 5 years compared to those whose years in present employment were 10 years and over. The 3 - 5 year group were significantly less satisfied with this factor than the 10 and over group. However, no differences existed relative to the 1 - 2 and 6 - 9 year groups.

Factor 5: Environmental support. The findings on this factor were similar to those reported above in Factor 4. Presented in Table 37 are the frequencies, mean scores on satisfaction with Environmental Support and the standard deviations for the various groups of Rehabilitation Medicine educators with respect to the number of years in their current employment. The highest mean score was reported by the 10 and over group. The 3 - 5 year group reported the lowest mean score on this factor.

One-way analysis of variance was computed. The results produced an F-ratio of 3.86 which was significant beyond the .05 level. Therefore,

Table 37

Comparison of the Mean Satisfaction Scores on the Factor of Environmental Support of Educators in Rehabilitation Medicine Grouped by Years in Present Employment

Years in Present Employment	Number of Respondents	Mean Scores	Standard Deviations	[redacted]	Probability	Groups Significantly Different[a] 1 2 3 4
1. 1 - 2	17	8.59	4.75	3.86*	0.0119	
2. 3 - 5	19	4.47	7.90			
3. 6 - 9	20	8.07	4.26			
4. 10 and over	38	9.21	3.59			†
Total	94	7.90	5.29			

* With df = 3/90, F.05 ≥ 2.71
[a] Scheffé Multiple Comparison of Means set at 0.10 level
† Indicates groups significantly different

statistically significant differences existed among the four groups of educators. The Scheffé test showed that the difference between the 3 - 5 group and the 10 and over group was significant. An inspection of the means, indicated that the 3 - 5 group were significantly less satisfied with the Environmental Support factor than the group with 10 or more years in their current employment.

Sub-problem 3.3: Job Satisfaction and Professional Variables

"To what extent are there differences in overall job satisfaction among sub-groups of respondents formed on the bases of their professional variables: total years of experience, number of publications and number of presentations?"

Total years of teaching experience. From the respondents' data on their total years of teaching experience, four groups were formed. Table 38 presents the group frequencies, the group mean scores and standard deviations on their overall job satisfaction. The lowest mean score was reported by those educators in the group with 3 - 5 years of teaching experience, while the highest mean overall job satisfaction was reported by educators who had at least 10 years of teaching experience.

One-way analysis of variance was carried out to test the significance of the observed differences in the group mean scores. The F-ratio of 2.55 obtained in the analysis was not significant at the .05 level. Therefore, it was concluded that there were no significant differences in the levels of overall job satisfaction among the groups of educators based on their total number of years of teaching experience.

However, when secondary analysis was carried out to seek for

Table 38

Comparison of the Mean Overall Job Satisfaction Scores of Educators in Rehabilitation Medicine Grouped by Total Years of Teaching Experience

Total Years of Teaching Experience	Overall Job Satisfaction				
	Number of Respondents	Mean Scores	Standard Deviations	F Value	probability
1 - 2	17	5.48	4.50	2.55*	0.0605
3 - 5	15	5.08	3.71		
6 - 9	21	6.40	2.85		
10 and over	41	7.38	2.53		
Total	94	6.45	3.30		

* With df = 3/90, F.05 $\geq$ 2.71

any differences among the groups based on the nine factors which underlie overall job satisfaction, factors 4, 5 , 6 and 9 showed significant differences. Those are reported below.

Factor 4: Benefits. Table 39 shows that the group mean scores increased as the total number of years of teaching experience increased. The group with a total experience of 10 years and over reported the highest mean score on this factor.

The observed differences in the mean scores were tested by one-way analysis of variance. The resulting F value of 4.05 was significant at the .01 level. That showed that a significant difference existed in the group mean scores. The Scheffé multiple comparison of means revealed that there was a significant difference between the 1 - 2 year group and and 10 years and over group. The observed differences between the other groups were not statistically significant. The conclusion was that the 10 years and over group were significantly more satisfied with the Benefits factor than the 1 - 2 year group.

Factor 5: Environmental support. An examination of Table 40 shows that the lowest mean score on the Environmental Support factor was reported by those educators in the 3 - 5 years group. The highest mean is reported by those educators who have at least 10 years of teaching experience.

The significance of the differences in the observed group means was tested by using one-way analysis of variance. The F-value of 4.16 was significant beyond the .01 level. That is, there were significant differences in the group mean scores. On application of the Scheffé test of multiple comparison of means, it was found that the mean score

Table 39

Comparison of the Mean Satisfaction Scores on the Factor of Benefits of Educators in Rehabilitation Medicine Grouped by Total Years of Teaching Experience

Total Years of Teaching Experience	Number of Respondents	Mean Scores	Standard Deviations	F Value	Probability	Groups Significantly Different[a] 1 2 3 4
			Benefits Satisfaction			
1. 1 - 2	17	4.68	4.59	4.05*	0.0095	
2. 3 - 5	15	5.32	3.87			
3. 6 - 9	21	5.55	5.77			
4. 10 and over	41	8.46	4.07			†
Total	94	6.63	4.79			

* With df = 3/90, F.05 ≥ 2.71; F.01 ≥ 4.01
[a] Scheffé Multiple Comparison of Means set at 0.10 level
† Indicates groups significantly different

Table 40

Comparison of the Mean Satisfaction Scores on the Factor of Environmental Support of Educators in Rehabilitation Medicine Grouped by Total Years of Teaching Experience

Total Years of Teaching Experience	Number of Respondents	Mean Scores	Standard Deviations	F Value	probability	Groups Significantly Different[a] 1 2 3 4
		Environmental Support				
1. 1 - 2	17	7.24	6.13	4.16*	0.0082	
2. 3 - 5	15	4.04	7.58			
3. 6 - 9	21	8.44	4.35			†
4. 10 and over	41	9.30	3.53			†
Total	94	7.90	5.29			

* With df = 3/90, F.05 ≥ 2.71; F.01 ≥ 4.01
[a] Scheffé Multiple Comparison of Means set at 0.10 level
† Indicates groups significantly different

of the 3 - 5 years group was significantly lower than those of the two groups with the most experience; that is, the 6 - 9 years and 10 years and over groups. There were no significant differences between the 1 - 2 year group and the other groups on this factor.

Factor 6: Work ethos. The total years of teaching experience and group mean scores on satisfaction with Work Ethos are presented in Table 41. The mean scores on this factor tended to increase with the number of years of teaching experience.

One-way analysis of variance was computed to test the significance of the apparent mean differences among the groups. The results show that an F-ratio of 3.31 was significant beyond the .05 level. That is, there was a significant difference in the level of satisfaction with the Work Ethos among the groups of educators.

Scheffé's multiple comparison of means was employed to identify the specific differences between the sub-groups. There was a significant difference in group means between the 1 - 2 and the 10 and over groups such that the latter were significantly more satisfied than the former. All other comparisons did not show significant differences.

Factor 9: Altruism. As shown in Table 42, the lowest mean score on this factor was reported by the 3 - 5 year group. The group of educators who had at least 10 years of teaching experience reported the highest mean satisfaction score on this factor.

From the analysis of variance carried out to test the significance of the mean score differences, an F-ratio of 3.55 was obtained. This was significant beyond the .05 level. That is, there was a significant difference in the mean scores among the four groups. The Scheffé multiple comparison of means test showed that a significant difference

Table 41

Comparison of the Mean Satisfaction Scores on the Factor of Work Ethos of Educators in Rehabilitation Medicine Grouped by Total Years of Teaching Experience

Total Years of Teaching Experience	Number of Respondents	Work Ethos Mean Scores	Standard Deviations	F Value	probability	Groups Significantly Different[a] 1 2 3 4
1. 1 - 2	17	4.26	6.57	3.31*	0.0235	
2. 3 - 5	15	4.70	5.85			
3. 6 - 9	21	6.95	4.75			
4. 10 and over	41	8.08	3.69			†
Total	94	6.60	5.09			

* With df = 3/90, F.05 ≥ 2.71
[a] Scheffé Multiple Comparison of Means set at 0.10 level
† Indicates groups significantly different

Table 42

Comparison of the Mean Satisfaction Scores on the Factor of Altruism of Educators in Rehabilitation Medicine Grouped by Total Years of Teaching Experience

Total Years of Teaching Experience	Number of Respondents	Altruism Satisfaction Mean Scores	Standard Deviations	F Value	probability	Groups Significantly Different[a] 1 2 3 4
1. 1 - 2	17	5.62	4.26	3.55*	0.0175	
2. 3 - 5	15	4.53	4.04			
3. 6 - 9	21	7.17	3.84			
4. 10 and over	41	8.00	3.74			†
Total	94	6.83	4.06			

* With df = 3/90, F.05 ≥ 2.71
[a] Scheffé Multiple Comparison of Means set at 0.10 level
† Indicates groups significantly different

existed in the mean scores between the 3 - 5 year group and the 10 and over group. It was concluded that the group of educators who had at least 10 years of teaching experience were significantly more satisfied with the Altruism aspect of their job than the 3 - 5 year group.

Number of publications. Publication was used as one indicator of productivity in order to examine the differences in job satisfaction among educators in Rehabilitation Medicine who might differ in this aspect of productivity. Three groups were formed based on the data on the number of publications in refereed journals in the last five years. The frequencies, mean overall job satisfaction scores and standard deviations for the three groups are presented in Table 43. The lowest mean overall job satisfaction score was reported by the group of educators who had one or two publications. The mean score for the group who had no publications was lower than the mean score for the group who had three or more publications. One-way analysis of variance was used to test the significance of the differences among the groups. An F-ratio of 1.09 was not significant at the .05 level. This showed that no significant difference existed in the level of overall job satisfaction among the three groups.

When secondary analyses were carried out using the nine factors underlying overall job satisfaction there was a significant difference among the groups on Factor 2, Content of Work. This difference was accounted for essentially by "the opportunity to do research" (Questionnaire Item 43).

The results of the analysis relating to Factor 2 are presented in Table 44. The lowest mean score on this factor was reported by the

Table 43

Comparison of the Mean Overall Job Satisfaction Scores of Educators in Rehabilitation Medicine Grouped by Number of Publications

	Overall Job Satisfaction				
Number of Publications	Number of Respondents	Mean Scores	Standard Deviations	F Value	probability
None	49	6.29	3.15	1.09	0.3409
1 - 2	21	5.88	3.59		
3 or more	24	7.26	3.35		
Total	94	6.45	3.30		

* With df = 2/91, F.05 $\geq$ 3.10

Table 44

Comparison of the Mean Satisfaction Scores on the Factor of the Content of Work of Educators in Rehabilitation Medicine Grouped by Number of Publications

Number of Publications	Number of Respondents	Mean Scores	Standard Deviations	F Value	probability	Groups Significantly Different[a] 1 2 3
	Content of Work Satisfaction					
1. None	49	7.30	4.77	3.49*	0.0347	
2. 1 - 2	21	5.31	2.21			
3. 3 or more	24	9.60	5.00			†
Total	94	7.44	5.60			

* With df = 2/91, $F_{.05} \geq 3.10$
[a] Scheffé Multiple Comparison of Means set at 0.10 level
† Indicates groups significantly different

group with 1 - 2 publications, while the highest mean score was reported by the group with 3 or more publications. The F-ratio obtained in Table 44 was significant beyond the .05 level. That is, there was a significant difference in the mean scores among the three groups. The Scheffé multiple comparison of means test revealed that the group with three or more publications were significantly more satisfied with the Content of Work factor than the group with one or two publications only.

Some significant differences on two job facets were found among educators grouped according to their publications. These differences are tabulated and included in Appendix E.3.

Number of presentations. Another indicator of productivity utilized to seek for differences among educators in Rehabilitation Medicine in Canada was the number of papers presented at professional/ scientific meetings in the last five years. From the respondents' data on the number of papers presented, three groups were formed. The presentation frequencies of each group, mean overall job satisfaction scores, F-ratio and probability are reported in Table 45. The "none" presentor group reported the lowest overall job satisfaction mean score. The highest overall satisfaction mean score was reported by the group of educators who had at least three presentations. One-way analysis of variance showed that with an F-ratio of 1.01, the observed differences in the mean satisfaction of the groups were not statistically significant at .05 level.

When secondary analyses were carried out using the nine factors underlying overall job satisfaction as the dependent variables, no significant differences existed among the groups of educators who had

Table 45

Comparison of the Mean Overall Job Satisfaction Scores of Educators in Rehabilitation Medicine Grouped by the Number of Presentations

Number of Presentations	Number Respondents	Mean Scores	Standard Deviations	F Value	probability
None	33	5.81	3.09	1.01*	0.3689
1 - 2	27	6.65	3.38		
3 and over	34	6.91	3.43		
Total	94	6.45	3.30		

* $F_{.05} = 3.10$

varying number of presentations. There were, however, significant differences among the groups in the level of satisfaction on two job facets. These differences are summarized and included in Appendix E.4.

PROBLEM 4: JOB SATISFACTION AND MOBILITY

Sub-problem 4.1

"What is the difference in the level of overall job satisfaction between mobile and non-mobile educators in Rehabilitation Medicine in Canadian universities?"

The data presented in Table 46 show that the non-mobiles had a higher overall satisfaction mean score than the mobiles. The t-test on the mean scores produced a t-value of 0.51 which was not significant at the .05 level. It was concluded that no significant difference existed between the overall job satisfaction mean scores of mobile and non-mobile educators.

No significant difference was observed in the mean satisfaction scores on any of the nine factors considered separately. However, one significant difference on the job facet, "Recognition of your work by others" is summarized and included in Appendix E.5.

Sub-problem 4.2

"What job characteristics were identified by the mobiles as contributory to their decisions to move?"

In order to identify the specific reasons for mobility, the mobile respondents were provided a list of 15 job characteristics which were identified in literature as potentially influential in the

Table 46

Comparison of the Mean Overall Job Satisfaction Scores of Educators in Rehabilitation Medicine Grouped by Mobility Characteristics

Mobility Characteristics	Number Respondents	Mean Scores	Standard Deviations	DF	t Value	2-Tail probability
Non-mobile	68	6.57	2.94	92	0.51*	0.616
Mobile	26	6.12	4.16			
Total	94					

*t.05 at 92 df = ± 1.98

"select-versus-reject" decisions among typical professionals (Brown, 1967:149). Respondents were asked to select the five most important job characteristics from the list and to rank order those five to the extent that they contributed to their decision to move.

The frequency with which the 15 job characteristics were selected, together with the "weighted response" which shows their relative importance to the respondents are summarized in Table 47.

The global entity - "The attraction of the new position," was of prime importance to the mobiles. The specificity of the attraction of the new position lay in the next four job characteristics which were second to fifth. For most mobile educators in Rehabilitation Medicine in Canadian universities "opportunity for research," "opportunity for further professional education" and "adequate recognition" had the strongest influence upon their decision to move. Other job characteristics such as "poor policies and regulations," "low feeling of accomplishment," "problems with the administration" and "limited responsibility" in that order were also identified with less frequency as contributing to their decisions to move on.

SUMMARY

Table 48 is a summary of the significant findings with regard to the level of overall job satisfaction and satisfaction with the factors among various groups of educators in Rehabilitation Medicine in Canadian universities. The findings are discussed in Chapter VIII followed by conclusions and implications.

Table 47

Job Characteristics Contributing to Decision to Move

Job Characteristics	Number of Times Ranked					Number of Times Cited	Weighted Response	Rank Order
	First	Second	Third	Fourth	Fifth			
1. Salary too low	-	2	3	-	3	8	20	12
2. Responsibility limited	3	3	2	1	3	12	38	8
3. Further salary prospect poor	-	3	4	4	1	12	33	9
4. Advancement prospect in rank poor	-	-	4	4	2	10	22	11
5. Research opportunities poor	5	7	3	3	6	24	74	2
6. Recognition inadequate	2	5	1	6	1	15	46	4
7. Problem with administration	4	2	2	2	1	11	39	7
8. Policies and regulations poor	2	5	1	2	4	14	41	5
9. Teaching load excessive	-	1	5	2	2	10	25	10
10. Peer inter-personal relations poor	-	-	1	2	1	4	8	14
11. Relationship with students poor	-	-	-	-	-	0	0	15
12. Low feeling of accomplishment	2	4	3	1	3	13	40	6
13. Feeling of insecurity on the job	-	1	-	2	1	4	9	13
14. New position more attractive	25	2	4	3	3	37	154	1
15. Opportunity for further professional education poor	3	5	3	4	2	17	54	3
Total*	46	40	36	36	33	191		

* The N here is varied since not all mobile respondents selected and ranked five items as instructed.

Table 48

Summary of Significant Findings in Respect of Overall Satisfaction and Factor Satisfaction

Factor	DEMOGRAPHIC CHARACTERISTICS										
	PERSONAL			ORGANIZATIONAL				PROFESSIONAL			
	Sex	Age	Education	Academic Rank	Salary	Primary Involvement	Years in Present Employment	Yrs. of Teaching Experience	Number of Publications	Number of Presentations	Mobility
Overall			*		***		*				
1. Working Conditions			*				*				
2. Content of Work									*		
3. Administrative Involvement											
4. Benefits				***	***	*	**	**			
5. Environmental Support							*	**			
6. Work Ethos	*							*			
7. Teaching Autonomy											
8. Accomplishment											
9. Altruism		*			**			*			

Key: * Significant difference found between means (≤ 0.05)
** Significant difference found between means (≤ 0.01)
*** Highly significant difference found between means (≤ 0.005)

CHAPTER VIII

SUMMARY, CONCLUSIONS AND IMPLICATIONS

This final chapter contains an overview of the study, the findings and a brief discussion of the findings relative to the literature reviewed. Some conclusions are drawn based on the findings. Consideration of the implications for administration and for further research is provided.

OVERVIEW OF THE STUDY

The Problem

The purpose of this study was to investigate the job attitudes relative to job satisfaction and job dissatisfaction of educators in Rehabilitation Medicine in Canadian universities. Specifically the intent was to discover which job facets and job related factors contributed to job satisfaction and job dissatisfaction as well as their relative importance to overall job satisfaction. Furthermore the study was intended to explore the applicability of existing theories of job satisfaction to this group of educators in Canadian universities.

A review of the literature pertaining to job satisfaction revealed that most of the existing theory focused on employees in business and industrial settings. Some studies had been done in educational institutions but in these the major target groups were

employees affiliated to primary and secondary schools. Little attention had been paid to the job attitudes of employees in post secondary institutions. In any case the factors reported by employees in different fields as contributors to their job satisfaction varied widely. Accordingly, some of those factors were used as the starting points in the investigation of the job attitudes relative to job satisfaction of educators in Physical and Occupational Therapy programs in eleven Canadian universities.

Instrumentation

In the conceptual framework for the study overall job satisfaction was conceptualized as a multifaceted entity. To measure that entity a questionnaire containing a large number of the job facets reflective of the job of educators in Rehabilitation Medicine was developed. The questionnaire had three parts.

Section I of the questionnaire elicited demographic data: sex, age, level of education, academic rank, salary, area of primary commitment, employment time, total years in present employment, total years of teaching experience, number of publications, number of presentations and mobility characteristics.

Section II of the questionnaire was dsigned to elicit attitudinal reactions regarding 31 job facets which were judged to characterize the work of educators in Rehabilitation Medicine. The intent was to measure both the importance and the satisfaction associated with each facet and, in addition, to provide a measure of overall job satisfaction.

Section III of the questionnaire consisted of open-ended

questions which requested the respondents to narrate two critical incidents that had contributed most to feelings of exceptional satisfaction with their jobs as educators and two critical incidents that had contributed to feelings of exceptional dissatisfaction with their jobs.

Methodology

The questionnaire was pilot tested on a group of educators in Rehabilitation Medicine in The University of Alberta. Following the pilot test, appropriate revisions were carried out on the questionnaire before it was mailed to the subjects.

The subjects of this study included 118 full time faculty members for the 1979/80 academic year in Physical and Occupational Therapy programs in eleven universities who were registered therapists. Their names were obtained from the heads of the programs. The subjects were mailed the questionnaire with a cover letter and a return paid envelope in a packet directed to their campus addresses.

Altogether, 106 returns were received after a second follow-up request, representing an 89.83 percent return. Twelve of the returned questionnaires were unusable. Therefore, 79.66 percent of the educators who were contacted actually formed the sample for this study.

Data Analysis

For ease of analysis, the data from the questionnaires were key-punched onto IBM computer cards. The Statistical Package for the Social Sciences program was used for processing the data. Appropriate

statistical measures were employed in order to determine the level of satisfaction and to determine the differences in job satisfaction scores among the respondents based on their demographic data. The major statistical procedures employed included frequency and percentage of reponses on each variable, mean scores, standard deviations, analysis of variance, chi-square and probability tests. Where F-values were significant at the .05 level, the Scheffé multiple comparison of means was used to identify the groups which were significantly different.

Review of Findings

In this study the research problems were framed in the form of research questions. The findings are summarized below under each of the research questions investigated in this study.

PROBLEM 1: OVERALL JOB SATISFACTION

Sub-problem 1.1

"To what extent do educators in Rehabilitation Medicine in Canada currently experience overall job satisfaction?"

The mean overall job satisfaction score indicated that in general, the educators included in this study reported moderate overall satisfaction with their jobs.

Sub-problem 1.2

"What job facets were identified as contributing significantly to the feeling of overall job satisfaction?"

Seven job facets accounted for most of the variation in the

feeling of overall job satisfaction. Together they accounted for 90.1 percent of the total variance. "Opportunity to use your knowledge and skill," alone accounted for 45 percent of the total variance.

Sub-problem 1.3

"What job facets were identified as most important to the feeling of overall job satisfaction?"

Nine job facets on the questionnaire had a mean rating of at least 4.5 on the scale where 4 is "very important" and 5 is "extremely important." These facets were deemed most important for the respondents' feeling of overall job satisfaction.

Sub-problem 1.4

"What is the relationship between overall job satisfaction and the importance of the job facets?"

The correlation between the importance rating of each job facet and the index of overall job satisfaction was low. The correlation between each unweighted job facet satisfaction and the index of overall job satisfaction was high. The correlation between the overall job satisfaction index and each of the 31 importance-weighted job facet satisfactions was not appreciably different from the correlation between the overall job satisfaction index and each of the 31 unweighted job facet satisfactions.

This means that the importance measure did not add a significant dimension to the measurement of overall job satisfaction. This was further confirmed by the findings in sub-problem 1.5.

Sub-problem 1.5

"What is the relationship between job facet importance and

job facet satisfaction for this group of educators?"

A positive rank order correlation coefficient of .55 which was significant at .001 level was obtained between the importance and satisfaction ratings of the job facets. A positive relationship existed between the importance the respondents attached to the given facets and the satisfaction they reported on the same facets.

Sub-problem 1.6

"Are the satisfying and dissatisfying facets consistent with the motivator-hygiene theory of job satisfaction described by Herzberg et al (1959)?"

There was a significant difference in the mean level of satisfaction reported by the respondents when on the job facets judged to be hygiene factors were compared to the facets judged to be motivators. The mean satisfaction score on all motivators together was significantly higher than the mean satisfaction score on all hygiene factors together. The mean importance of the motivators was also significantly higher than that of hygienes.

Further examination of the responses showed that six out of the seven job facets on which at least 90 percent of the respondents were satisfied were judged to be related to the intrinsic aspects of the job otherwise classified as motivators. On the other hand, all but two of the nine job facets on which at least 20 percent of the respondents were dissatisfied were judged to describe primarily the extrinsic aspects of the job classified as hygiene factors.

Three of the seven job facets which accounted for 90.1 percent

of the total variance in overall job satisfaction were judged to be primarily related to the intrinsic aspects of the job and accounted for 50 percent of the total variance; while 4 were judged to relate to extrinsic components of the job. Finally, nine job facets were identified as most important to the feeling of overall job satisfaction; eight of them were deemed related to the intrinsic aspects of the job while one related to extrinsic aspects.

PROBLEM 2: JOB ASPECT SATISFACTION AND DISSATISFACTION

Sub-problem 2.1

"What critical incidents were identified by educators in Rehabilitation Medicine in Canadian universities as the sources of satisfaction and dissatisfaction?"

Three job aspects were mentioned with the highest frequency in the critical incidents which were identified as the sources of the feeling of job satisfaction. Those were "recognition," "achievement" and "content of work." "Recognition" and "achievement" together were mentioned most often and appeared in 69.5 percent of the satisfying critical incidents.

On the other hand, the three job aspects which were mentioned most frequently in the critical incidents associated with a feeling of exceptional dissatisfaction were: "context of work," "policies and administration" and "interpersonal relationship with peers." Together they appeared in 54.2 percent of the dissatisfying critical incidents. A number of other job aspects were mentioned with less frequency.

Sub-problem 2.2

"Is there any consistency between these incidents and the motivator-hygiene dichotomy of Herzberg et al. (1959)?"

Four job aspects (which by Herzberg's classification scheme are motivators) were associated more with job satisfaction than with job dissatisfaction. They were "recognition," "achievement" "content of work" and "advancement." One motivator item namely inadequate "responsibility" was identified more as a source of job dissatisfaction than job satisfaction.

On the other hand five job aspects (classified by Herzberg's scheme as hygiene factors) were associated more with job dissatisfaction than with job satisfaction. They were "work context," "policies and administration," "interpersonal relationship with peers," "constraint on personal life," and "reward system." However, one job aspect, "interpersonal relationship with students," was identified substantially more as a source of job satisfaction than job dissatisfaction among this group of educators.

In summary, job aspects classified as motivators were mentioned proportionately more often as sources of satisfaction than as sources of dissatisfaction. Job aspects classified as hygienes were mentioned proportionately more often as sources of dissatisfaction than as sources of satisfaction.

When all job aspects classified as motivators were considered they were identified proportionately more often than hygienes in describing satisfying incidents; hygiene aspects were identified proportionately more often than motivators in describing the dissatis-

fying incidents.

PROBLEM 3: OVERALL JOB SATISFACTION AND DEMOGRAPHIC VARIABLES

The difference in job satisfaction among educators in Rehabilitation Medicine in Canada was investigated using demographic data as the independent variables. The primary analysis was done using the index of overall job satisfaction as the dependent variable. The secondary analysis was carried out on job facet factors. The investigations were grouped under three sub-problems.

Sub-problem 3.1: Job Satisfaction and Personal Variables.

"To what extent are there differences in overall job satisfaction between subgroups of respondents formed on the basis of their personal variables; sex, age, academic level?"

Sex. Female respondents were significantly less satisfied than their male counterparts on the factor of Work Ethos. No other significant differences were obtained.

Age. Although older educators tended to express higher job satisfaction than the younger educators no statistically significant differences existed among the age groups on their mean level of overall job satisfaction. However, the younger age group (40 years) were significantly less satisfied than the group 40-49 years, with the extent to which their job provided them the opportunity to be Altruistic.

Level of education. The respondents who had teaching certificates expressed significantly higher mean overall job satisfaction

than the respondents who had only the baccalaureate in Physical and/or Occupational Therapy. It was also found that those educators who had teaching certificates and those who had graduate degrees were significantly more satisfied with their Working Conditions than their peers who had only the baccalaureate.

Sub-problem 3.2: Job Satisfaction and Organizational Variables

"To what extent are there differences in overall job satisfaction between subgroups of respondents formed on the bases of their organizational variables?"

Academic rank. The level of overall job satisfaction was highest for the group of educators who were Associate Professors or Professors while the level of overall job satisfaction of the Assistant Professor group was the lowest. Those below Assistant Professor scored between these two groups. However, the observed differences among the three groups was not statistically significant.

Associate Professors and Professors were significantly more satisfied with the Benefits they got on their job than the groups below Associate Professor rank.

Salary. The level of overall job satisfaction was highest for the group of educators who were paid the highest salaries. Educators whose salaries were over $33,000 had significantly higher overall job satisfaction than the two groups who earned $21,000 or less, and $21,001-$27,000 respectively.

With regard to Benefits, educators with salaries above $33,000 were significantly more satisfied than those whose salaries

were below $27,000.

On the factor of Altruism, educators on a salary $21,000 or less were significantly less satisfied with the altruistic content of their work than educators on a salary above $33,000.

Primary involvement. No significant differences in the level of overall job satisfaction was observed among these educators grouped according to the area of their primary commitment of more than 60 percent of their time on the job. However, the predominantly "administration" group were significantly more satisfied than the "mixed" group with the Benefits they receive on their job.

Years in present employment. The overall job satisfaction mean score of educators in Rehabilitation Medicine was highest for the group who had stayed the highest number of years in their present employment. The respondents who were 3-5 years in current employment reported significantly less overall job satisfaction than the respondents who had spent 10 years and over in that employment.

Educators who were in their first or second year in their current employment were significantly more satisfied with regard to Working Conditions than educators who had spent 3-5 years in their current employment.

On the Benefits factor, educators with 3-5 years in their present employment were significantly less satisfied with the Benefits they receive on their job than educators who had been on their current employment for 10 or more years. Similarly the educators with 3-5 years in their present employment were significantly less satisfied with the Developmental Support provided to them on the job than

educators who had 10 or more years in their current employment.

Sub-problem 3.3: Job Satisfaction and Professional Variables

"To what extent are there differences in overall job satisfaction among subgroups of respondents formed on the bases of their professional variables: total years of experience, number of publications and number of presentations?"

Total years of teaching experience. There was no statistically significant difference in the level of overall job satisfaction among groups of educators based on their total number of years of experience even though the educators with the highest total years of teaching experience tended to express the highest overall job satisfaction.

The educators with 1-2 years of teaching experience were significantly less satisfied with the Benefits they derive from their job than educators with 10 or more years of teaching experience. The Environmental Support factor provided a significantly lower level of satisfaction for educators with 3-5 years of teaching experience than for educators with more than five years of teaching experience. No differences were present on the Environmental Support factor between educators who had 1-2 years of teaching experience and other groups with more teaching experience.

On Work Ethos, however, the educators with 1-2 years of teaching experience were less satisfied than educators who had 10 or more years of teaching experience. No significant difference existed between these two groups and the groups of educators whose teaching experience ranged from three to nine years.

with each other, presence or absence of help, cooperation, and communication.

8. Inter-personal Relations with Students - Any reference to getting along or not getting along with students and obtaining or not obtaining student cooperation was coded here.

9. Policies and Administration - This contains all references relating to academic policy implementation, quality of leadership, delegation, consultation, supportiveness of and communication with administrators.

10. Reward System - Under this category were coded all references to salary, pay relative to amount of work, merit awarded or denied, justice or injustice in the institution's remuneration.

11. Constraints in Personal Life - All references with regard to subtle pressures, expectations and demands on the job that affected the respondent's personal life or philosophy were coded here.

The frequency counts of the occurrence of events in individual categories were computed. A chi-square analysis was used to find the significance of differences among the proportion of events that fell into different categories, followed by a t-test to determine the level of significance.

Chapter V

ANALYSIS OF DEMOGRAPHIC DATA OF RESPONDENTS

Questionnaire data on the demographic characteristics of the respondents are reported in this chapter. Column counts were run on the demographic data provided by the respondents. A wide range was evident on each of the variables classified as personal, organizational, professional and mobility characteristics. These characteristics are grouped and reported below.

PERSONAL CHARACTERISTICS

Table 3 contains data which show the frequency and percentage distribution of respondents on the independent variables classified as personal characteristics.

Sex

Since physical and occupational therapy are "traditionally female" professions it was not surprising that there were almost four times as many females as males among the respondents. Of the respondents, 78.7 percent (74) were females and 21.3 percent (20) were males.

Age

Approximately 43 percent of the respondents were under 40 years of age, 32 percent reported their ages as 40-49, and almost 26 percent

Table 3

Personal Characteristics of Respondents

Characteristic	Respondents	
	Frequency	Percentage
Sex		
Female	74	78.7
Male	20	21.3
Total	94	100.0
Age		
Under 40	40	42.6
40 - 49	30	31.9
50 and over	24	25.5
Total	94	100.0
Academic Qualification		
Undergraduate Professional degree	23	24.5
Teaching Certificate - No graduate degree	22	23.4
Master's Degree	44	46.8
Doctoral Degree	5	5.3
Total	94	100.0

were 50 years of age or older.

Academic Qualifications

In view of the fact that there is a continued increase in the pursuit of higher education through part-time programs, the academic qualification for the respondents was not measured by the number of years of post secondary education as is the usual practice. Instead their academic qualification was based on the highest degree or diploma attained by the respondents at the time of the study.

Among the respondents approximately one-quarter (24.5 percent) indicated that their highest academic qualification was an undergraduate professional degree in physical and/or occupational therapy. Those who had teaching certificates in addition to their basic professional qualifications constituted 23.4 percent. Almost half of the total respondents (46.8 percent) had a Master's degree. Five respondents (5.3 percent) had Doctorates.

ORGANIZATIONAL CHARACTERISTICS

The frequency distributions of the respondents on the variables classified as organizational characteristics are tabulated in Table 4.

Academic Rank

The data on the respondents' academic ranks in their different universities provided four sub-groups. Approximately 18 percent of the respondents held academic ranks lower than assistant professor, while 44.7 percent held the rank of assistant professor. Thirty-three percent of the respondents were Associate professors while 4.2 percent were professors.

Table 4

Frequency and Percentage Distributions of Respondents Based on Their Organization Characteristics

Characteristic	Respondents	
	Frequency	Percentage
Academic Rank		
Below Assistant Professor Rank	17	18.1
Assistant Professor	42	44.7
Associate Professor	31	33.0
Professor	4	4.2
Total	94	100.0
1979/80 Salary		
$21,000 or less	19	20.2
$21,001 - $27,000	38	40.4
$27,001 - $33,000	24	25.6
Over $33,000	13	13.8
Total	94	100.0
Area of Primary Involvement		
Predominantly Administration	11	11.7
Predominantly Teaching	34	36.2
Combination of All Academic Responsibilities	49	52.1
Total	94	100.0

Salary

From the data provided by the respondents four sub-groups were formed based on their income levels. From Table 4, it can be noted that one-fifth (20.2 percent) of respondents reported that their salary for the 1979/80 academic year was $21,000 or less. Two-fifths of the respondents (40.4 percent) reported a salary between $21,001 and $27,000. Of the remainder, 25.6 percent reported that their salary was between $27,001 and $33,000, while 13.8 percent reported a salary higher than $33,000 in the 1979/80 academic year.

Area of Primary Involvement

The data here provided a measure of the proportionate distribution of the respondents' time to specified tasks on their jobs. Essentially the idea was to identify the area of highest commitment of time on the job.

Of all respondents, 11.7 percent indicated that they spent more than two-thirds of their time in administration and administration related duties, while 36.2 percent indicated that they spent more than two-thirds of their time on the job in teaching. The remainder, 52.1 percent, had their time spent almost evenly on teaching, research, other university activities and some administrative responsibilities.

PROFESSIONAL CHARACTERISTICS

Years of Experience

In Table 5 are reported the frequency percentage distributions of respondents according to their years of teaching experience in their

Table 5

Professional Characteristics of Respondents Based on Years of Teaching Experience

Number of Years	In Present Department		In Canada		In Entire Career	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
1 - 2	17	18.1	17	18.1	17	18.1
3 - 5	19	20.2	16	17.0	15	16.0
6 - 9	20	21.3	20	21.3	21	22.3
10 and over	38	40.4	41	43.6	41	43.6
Total	94	100.0	94	100.0	94	100.0

present employment, years of experience in teaching Rehabilitation Medicine in Canada, and total years of experience in teaching in their entire professional career. The subdivisions were chosen to reflect the usual period of probation, the periods when individuals usually began to expect promotion and tenure, and the consolidation periods in an employment.

Publications and Presentations

The professional characteristics of the respondents based on their proven ability to publish refereed articles and make presentations in scientific meetings in the last five years are presented in Table 6.

Table 6

Professional Characteristics of Respondents Based on Their Publications and Scientific Presentations

Number of Papers	Publications		Presentations	
	Frequency	Percentage	Frequency	Percentage
None	49	52.1	33	35.1
1 - 2	21	22.3	27	28.7
3 and over	24	25.5	34	36.2
Total	94	100.0	94	100.0

More than half of the respondents, 52.1 percent, reported that they had no publications, 22.3 percent had one or two publications and 25.5 percent had at least three publications. The range in the publication variable was high from 0 to 33. The highest publisher among the respondents reported 33 publications when the next three highest publishers had 14, 10, and eight respectively.

With respect to presentations at scientific meetings, almost two-thirds of the respondents (64.9 percent) reported that they had read papers at scientific meetings in the last five years. The number of such presentations ranged from 0 to 50, with 28.7 percent of respondents reporting one or two papers, while 36.2 percent had read at least three papers in the last five years. Although the highest presentor had 50 presentations, the next three highest presentors had 15, 12, and 10, respectively.

MOBILITY CHARACTERISTICS

Three measures were used to ascertain the extent of intra-professional, interorganizational mobility among educators in Rehabilitation Medicine in Canada:

(1) The number of schools/departments in which the respondent had been employed in a full-time academic position (Questionnaire item 8).

(2) How long the respondent intended to remain with the present employer (Questionnaire item 12).

(3) The number of letters of enquiry the respondent had sent to potential employer(s) since January 1979 (Questionnaire

item 13).

The figures for the respective measures are shown in Table 7.

Table 7

Mobility Characteristics of Respondents

Characteristics	Respondents	
	Frequency	Percentage
Mobiles	26	27.7
Non-mobiles	68	72.3
Total	94	100.0

Through the use of the SPSS programme it was possible to extract the figures in the three measures such that each mobile educator was included once only. The combination showed that 27.7 percent belonged to the mobile group while 72.3 percent were grouped as non-mobile (stable).

Respondents who indicated that they had either moved or had reached a point at which they would like to move were asked to rank-order 15 job-related items to the extent that they contributed to their decision to move. The detailed analysis of their responses is presented in Chapter VII.

SUMMARY

The demographic data gathered from the respondents were analyzed to determine the characteristics of educators in Rehabilitation Medicine participating in the study. The characteristics were grouped as personal, organizational, professional and mobility categories.

The subjects consisted of full-time faculty members in Physical and Occupational Therapy programs in 11 Canadian universities. Of the 94 subjects, 40.4 percent were from Occupational Therapy, 54.3 percent were from Physical Therapy and 5.3 percent had responsibilities in both Physical and Occupational Therapy programs. Grouped by sex, there were almost four times as many female respondents as males.

Both the mean and median age group for the respondents was 40 - 49 years. More than half the respondents had graduate degrees. The highest percentage (44.7 percent) of the respondents held assistant professor ranks in 1979/80, while 35 percent held academic ranks above assistant professor. Both the mean and the median salary scale for 1979/80 academic year for this group were in the $24,000 - $27,000 range.

Although the number of years in the present employment ranged from one year to 37 years, the mean length of employment with the present employer was 8.8 years with a median of 7.5 years. With regard to the total years of teaching experience, it ranged from one year to 41 years, with a mean of 10 years and a median of 8.6 years.

On the two indicators of scholarly productivity, more than half (52.1 percent) of the respondents had had no publication in the last five years, while more than one-third (35.1 percent) of the respondents had not presented papers in scientific sessions in the last five

years. Classified according to their mobility characteristics, a large proportion (72.3 percent) of respondents had remained employed in only one university in Canada and had never taught in a program in any other university in Canada.

Chapter VI

ANALYSIS OF DATA: JOB FACETS, JOB ASPECTS AND JOB SATISFACTION

This chapter contains the report of statistical analyses carried out to determine the extent to which educators in Rehabilitation Medicine in Canada experienced overall satisfaction on their job, and to determine the job facets which contributed to their feeling of overall satisfaction. Reported in this chapter also are the relationship between facet importance and facet satisfaction, the relationship between facet importance and overall satisfaction and a test to determine whether the factors which determine job satisfaction are separate from the factors which determine job dissatisfaction.

This chapter follows the order of research questions 1 and 2 that were presented in Chapter I.

PROBLEM 1: OVERALL JOB SATISFACTION

Sub-problem 1.1

"To what extent do educators in Rehabilitation Medicine in Canada currently experience overall job satisfaction?"

Two indices were used in determining the level of overall job satisfaction experienced by the respondents. They were: the facet free one-item rating, and the mean value obtained from the sum of, the product of the job facet importance and the job facet satisfaction. The facet

free one-item rating produced a mean of 5.12 which corresponded to the response category cued verbally as moderately satisfied. Using the transformed scores the second index produced a mean overall satisfaction score of 6.45.

On the whole there were no job facets on which all respondents were satisfied, nor was there a facet on which all respondents were dissatisfied. The percentage frequency distribution of the respondents on all 31 job facets in the questionnaire is provided in Table 49 which is included in Appendix D. When the response categories "highly satisfied," "moderately satisfied," and "slightly satisfied," were combined, it was found that at least 90 percent of the respondents reported satisfaction with seven of these job facets. The seven job facets are shown in Table 8.

Table 8

Seven Job Facets on Which the Highest* Percentages of Satisfaction Were Reported

Job Facet	Mean	Percentage Satisfied
Freedom to select the subject matter for courses taught	5.62	96.8
The provision for sick leave	5.54	94.7
Relationship with students	5.34	94.7
Opportunity to use own initiative	5.18	92.6
Opportunity to use own knowledge and skill	5.11	91.5
Intellectual stimulation in work	4.96	90.4
Feeling of achievement as an educator	4.85	90.4

* Only facets with more than 90 percent of respondents satisfied are reported.

On the other hand, by collapsing the response categories "slightly dissatisfied," "moderately dissatisfied," and "highly dissatisfied," it was observed that there were nine job facets on which at least 20 percent of the respondents were dissatisfied. Those job facets are shown in Table 9.

Table 9

Nine Job Facets on Which the Highest* Percentages of Dissatisfaction Were Reported

Job Facet	Mean Score	Percentage Dissatisfied
The physical conditions of your classrooms and laboratories	3.86	39.4
The use of research and publications in determining salary increments	3.82†	31.9
The status accorded to educators in your profession within your university	3.99†	30.9
Opportunity to do research	3.87†	30.9
Methods used to determine faculty promotion and tenure	4.03†	29.8
The policies regulating sabbatical leave	4.26†	27.7
The number of non-teaching duties performed	4.19†	27.7
The time available for lecture preparations	4.31†	25.5
Your participation in decision making process in your school/department	4.56	20.2

* Only job facets with at least 20 percent of respondents dissatisfied are reported.

† Job facets on which the N varied due to "not applicable" responses.

It was observed that the distribution of respondents was skewed toward the "satisfied" end of the scale. The presence of "not applicable"

responses makes the "satisfied" plus "dissatisfied" on some facets not equal to 100.0 percent. Therefore, extremes are reported here to emphasize those job facets which had fairly clear agreement among the respondents resulting in 16 out of 31 job facets which appeared in Tables 8 and 9.

Sub-problem 1.2

"What job facets are identified as contributing significantly to the feeling of overall job satisfaction?"

In order to examine the above research question, a stepwise multiple regression procedure was used to determine the job facets (that is, predictor variables) which were associated with the greatest percentage of variance in overall job satisfaction for the respondents. The stepwise multiple regression procedure was stopped when the entry of subsequent predictor variables failed to account for more than two percent of variance.

The job facets, the significance of each of the facets, the cumulative percentage of variance and the percentage of variance accounted for by each job facet are presented in Table 10. The seven job facets together accounted for 90.1 percent of the total variance.

Sub-problem 1.3

"What job facets are identified as most important to the feeling of overall job satisfaction?"

To examine the above research question, the mean importance attached by the respondents to each of the 31 job facets on Section II of the questionnaire was calculated using the Statistical Package for the Social Sciences (SPSS) program (Nie et al., 1975). A job facet

Table 10

Stepwise Multiple Regression Analysis Using the 31 Job Facets with Overall Job Satisfaction

Criterion Variable	Predictor Variables	Increase in Prediction		Percentage of Variance	
		F	p	Cumulative	Individual
Overall Job Satisfaction	Opportunity to use your knowledge and skill	37.47	.0000	45.0	45.0
	The number of non-teaching duties performed by you	66.25	.0000	64.8	19.8
	The status accorded to educators in your profession within your university	52.21	.0000	74.9	10.1
	The sense of responsibility of the students	38.54	.0000	81.3	6.4
	The methods used in determining faculty promotion and tenure	44.63	.0000	85.2	3.8
	Opportunity for professional growth	26.35	.0000	87.6	2.4
	Your freedom to select the subject matter for your courses	20.87	.0000	90.1	2.4

was regarded as most important if its mean importance rating could be rounded to 5.0.

Summarized in Table 11, in descending order of magnitude of their importance, are nine job facets which the respondents identified as most important to their feeling of satisfaction with their job.

Table 11

Job Facets Identified as Most Important to the Feeling of Satisfaction on the Job

Job Facet	Mean Importance Rating*
Freedom to select the subject matter of courses taught	4.76
Opportunity to use initiative	4.70
Opportunity to use own knowledge and skill	4.69
Intellectual stimulation in work	4.69
Relationship with students	4.65
Feeling of achievement as an educator	4.60
Availability of library and A/V resources	4.60
Opportunity for professional growth	4.59
Assignment to teach particular courses	4.52

* Maximum rating = 5.0

Sub-problem 1.4

"What is the relationship between overall job satisfaction and the importance of the job facets?"

In order to ascertain the relationship between the importance ratings of the job facets and the index of overall job satisfaction,

Pearson product-moment correlation coefficients were computed between the overall job satisfaction index and the following measures: the mean job facet importance, the mean job facet satisfaction and the mean importance-weighted job facet satisfaction. The obtained correlation coefficients are shown in Table 12.

Applying Garrett's (1960:176) interpretation of coefficients to the results in Table 12, five out of 31 correlation coefficients between overall job satisfaction and importance had values between .20 and .37 which indicate low or slight relationship. The remaining 26 correlation coefficients were less than .20 which denotes indifferent or negligible relationship. On the other hand, each of the 31 correlation coefficients between overall job satisfaction and the unweighted job facet satisfactions was above .20.

However, the correlation between overall job satisfaction and each of the unweighted job facet satisfactions was not appreciably improved by the addition of the importance measure except on three job facets, namely "provision for sick leave," "prospect of comfortable retirement," and "feeling of job security." In other words, the correlation coefficient obtained with importance weighted job facet satisfaction was not in most cases, appreciably different from that obtained with the unweighted job facet satisfaction as shown in Table 12.

Sub-problem 1.5

"What is the relationship between job facet importance and job facet satisfaction for this group of educators?"

To test this relationship the means of the scale values of both Importance and Satisfaction on the 31 job facets were computed. Using

Table 12

Comparison of Correlations Between Overall Job Satisfaction and Job Facet Importance, Job Facet Satisfaction and Weighted Job Facet Satisfaction

	Correlation with Overall Job Satisfaction		
Job Facet	Importance	Satisfaction	Satisfaction x Importance
Salary	.133	.347	.335
Promotion and tenure procedures	.170	.582	.558
Research and publications in salary increments	.022	.400	.431
Sabbatical leave policies	.174	.398	.381
Provision for sick leave	.322	.351	.413
Prospects of comfortable retirement	.367	.431	.517
Feeling of job security	.359	.328	.407
Number of hours of teaching	.177	.438	.444
Time available for lecture preparation	.117	.381	.413
Number of non-teaching duties	.001	.579	.567
Assigned course to teach	.060	.300	.293
Freedom to select subject matter of course taught	.004	.204	.219
Availability of library and A/V resources	.140	.518	.519
Classroom and lab conditions	.165	.587	.602
Availability of useful advice	-.105	.648	.627
Relationship with administrator(s)	.177	.377	.431
Congeniality of professional colleagues	-.014	.573	.534
Relationship with students	.086	.441	.435
Opportunity to help others find success	.233	.507	.513

Table 12
(Cont'd.)

Job Facet	Correlation with Overall Job Satisfaction		
	Importance	Satisfaction	Satisfaction x Importance
Sense of responsibility of students	.083	.321	.320
Minimum acceptable student achievement	.043	.445	.470
Status accorded to therapy educators	.092	.582	.592
Feeling of achievement	.152	.645	.655
Recognition of own work	.093	.440	.455
Intellectual stimulation in work	.053	.532	.535
Opportunity for professional growth	-.145	.556	.555
Opportunity to do research	-.088	.593	.600
Opportunity to use initiative	.163	.580	.587
Opportunity to use knowledge and skill	.204	.670	.671
Participation in decision making	.141	.371	.360
Opportunity to do socially significant tasks	.119	.454	.455

the mean scores in each dimension, the job facets were rank ordered from high to low on the basis of the mean values of importance, and then on the mean values of satisfaction. The rank-order correlation was calculated as suggested by Guilford (1936:339) using the SPSS program.

Table 13 illustrates the results of the statistical procedure. The rank-order correlation (rho = .55) was significant at the .001 level. In other words, there was a substantial positive relationship between the relative amount of importance the respondents attached to the given facets and the relative amount of satisfaction they felt toward the given facets.

Sub-problem 1.6

"Are the satisfying and dissatisfying facets consistent with the motivator-hygiene theory of job satisfaction described by Herzberg et al. (1959)?"

An examination of the frequency run on the respondents' responses to the 31 job facets in Section II of the questionnaire showed that there were no job facets on the questionnaire which could be described as either totally satisfying or dissatisfying. The purpose of the above research question was to investigate whether or not the job facets judged to be motivators were associated with significantly higher levels of satisfaction than the job facets judged to be hygienes.

In accordance with Herzberg's classification, 12 of the 31 job facets were judged to be items intrinsic to the job and for analysis, were categorized as "motivators." These were item numbers 27, 28, 35, 39, 40, 41, 42, 43, 44, 45, 46 and 47 on the questionnaire. The remaining 19 items on Section II of the question were deemed extrinsic to the

Table 13

Rank Order Correlation of Paired Mean Scale Values of Importance and Satisfaction on 31 Job Facets

Item	Importance $\bar{x}$ Score	Satisfaction $\bar{x}$ Score	Importance Rank	Satisfaction Rank
Salary	3.56	4.74	29	17
Promotion and tenure procedures	3.94	4.03	24	27
Research and publications in salary increments	3.47	3.82	30	31
Sabbatical leave policies	3.85	4.26	26.5	25
Provision for sick leave	3.69	5.54	28	2
Prospects of comfortable retirement	3.89	4.83	25	14.5
Feeling of job security	4.04	4.71	21	18.5
Number of hours of teaching	4.02	4.71	22	18.5
Time available for lecture preparation	4.25	4.31	16	24
Number of non-teaching duties	3.85	4.19	26.5	26
Assigned course to teach	4.52	5.13	9	5
Freedom to select subject matter of course taught	4.76	5.62	1	1
Availability of library and A/V resources	4.60	5.01	6.5	7
Classroom and lab conditions	4.15	3.86	18	30
Availability of useful advice	4.28	4.67	15	20
Relationship with administrator(s)	4.29	4.77	14	16

Table 13
(Cont'd.)

Item	Importance $\bar{x}$ Score	Satisfaction $\bar{x}$ Score	Importance Rank	Satisfaction Rank
Congeniality of professional colleague	4.31	4.97	13	9
Relationship with students	4.65	5.34	5	3
Opportunity to help others find success	4.14	4.99	19	8
Sense of responsibility of students	4.48	4.84	10	12.5
Minimum acceptable student achievement	4.43	4.84	11	12.5
Status accorded to therapy educators	4.12	3.99	20	28
Feeling of achievement	4.50	4.85	6.5	11
Recognition of own work	3.96	4.67	23	21
Intellectual stimulation in work	4.69	4.96	3.5	10
Opportunity for professional growth	4.59	4.65	8	22
Opportunity to do research	4.20	3.87	17	29
Opportunity to use initiative	4.70	5.18	2	4
Opportunity to use knowledge and skill	4.69	5.11	3.5	6
Participation in decision making	4.38	4.56	12	23
Opportunity to do socially significant tasks	3.46	4.83	31	14.5

* Rho = .55, significant at .001

job and were categorized as "hygienes."

To examine the research question, the following statistical procedures were followed:

(i) The mean score on the motivator items was computed.

(ii) The mean score on the hygiene items was computed.

(iii) By means of a t-test, the difference between the two means was examined for significance.

The results of the statistical analyses are presented in Table 14. Further analysis was carried out on the importance of the "motivators" together compared to the importance of the "hygienes" together.

Table 14

Comparison of the Mean† Satisfaction Scores on Hygiene Items and Motivator Items on the Questionnaire

Category	No. of Respondents	Mean Scores	Standard Deviations	D.F.	t Value	Probability
Hygienes	94	5.66	3.60	93	-6.53*	.000
Motivators	94	7.70	3.65			

* t.001 at 93 df = ± 3.373; † range = -15 to 15.

A t-value of -6.53 was obtained. This value was significant beyond the .001 level which indicated that there was a significant difference in the mean scores. The mean satisfaction reported on the motivator items together was significantly higher than the mean satisfaction on the hygiene items together; their importance was also significantly higher (t = -6.89), beyond the .001 level.

PROBLEM 2: JOB ASPECT SATISFACTION AND DISSATISFACTION

The purpose of problem 2 was to investigate the job attitudes of educators in Rehabilitation Medicine in Canadian universities as related to the critical incidents on their jobs which they personally identified as contributing to their feeling of satisfaction or dissatisfaction with their jobs. Specifically, two sub-problems were investigated.

Sub-problem 2.1

"What critical incidents were identified by educators in Rehabilitation Medicine in Canadian universities as the sources of satisfaction and dissatisfaction?"

This research question was examined by first carrying out a content analysis of the critical incidents identified by the respondents in the narrative part of the questionnaire in Section III. The procedure followed in the content analysis was described in Chapter IV. After the content analysis a frequency count and percentages were tallied, using the SPSS program, on the job aspects which appeared in the critical incidents narrated by the respondents. Following closely Herzberg's et al. (1959) classificatory scheme, the job aspects which appeared in the critical incidents were also grouped into motivators and hygienes.

Table 15 presents the frequency and percentage distributions of the job aspects identified in the critical incidents which were associated most with the respondents' feelings of satisfaction. "Recognition" was mentioned in 39.5 percent of the satisfying critical incidents. "Achievement" appeared in 30.3 percent, and "content of work" was identified in 13.6 percent of the satisfying incidents. "Interpersonal

Table 15

Frequency and Percentage Distribution of Job Aspects Identified by Respondents in Critical Incidents Contributing to the Feeling of Exceptional Satisfaction

N = 81

Job Aspects		Frequency	Percentage
Recognition	(M)	64	39.5
Achievement	(M)	49	30.2
Content of work	(M)	22	13.6
Interpersonal relationship with students	(H)	12	7.4
Advancement	(M)	8	4.9
Responsibility	(M)	4	2.5
Constraints on personal life	(H)	2	1.2
Context of work	(H)	1	0.6
Total		162*	

Note: The abbreviations M = motivator; H = hygiene.
* Not all respondents provided information on this Section.

relationship with students" was identified in association with the feeling of job satisfaction in 7.4 percent of the total incidents. The remaining job aspects were associated infrequently with the feeling of job satisfaction.

The three job aspects which appeared most frequently in the satisfying critical incidents - "recognition," "achievement" and "content of work" accounted for 83.3 percent of the total job aspects in the satisfying incidents. Two other motivators which were mentioned less frequently, "advancement" and "responsibility" together appeared in 7.4

percent of the incidents. Herzberg classified "relationship with subordinates (students)" as a hygiene factor, even though it operated as a motivator for this group. The findings here tend to show that for job aspects motivators were the chief contributors to job satisfaction for educators in Rehabilitation Medicine.

The job aspects which appeared in the critical incidents narrated by the respondents as contributing to their feeling of exceptional dissatisfaction are summarized in Table 16.

Table 16

Frequency and Percentage Distribution of Job Aspects Identified by Respondents in Critical Incidents Contributing to the Feeling of Exceptional Dissatisfaction

N = 78

Job Aspects		Frequency	Percentage
Context of work	(H)	33	21.3
Policies and administration	(H)	29	18.7
Interpersonal relationship with peers	(H)	22	14.2
Responsibility	(M)	15	9.7
Content of work	(M)	14	9.0
Constraints on personal life	(H)	14	9.0
Reward system	(H)	12	7.7
Achievement	(M)	8	5.2
Interpersonal relationship with students	(H)	4	2.6
Recognition	(M)	3	1.9
Advancement	(M)	1	0.6
Total		155*	

Note: The abbreviations M = motivator; H = hygiene.
* Not all respondents provided information on this Section.

The three job aspects which were mentioned most frequently were "context of work" (21.3 percent), "policies and administration" (18.7 percent) and "interpersonal relationship with peers" (14.2 percent). By Herzberg's classification, these job aspects are extrinsic to the job: they are hygiene factors. Three other hygiene factors, "reward system," "constraint on personal life" and "interpersonal relationship with students" (subordinates) together accounted for 19.3 percent of the dissatisfying critical incidents. However, five job aspects which are intrinsic to the job and are classified as motivators, together accounted for 26.4 percent of the dissatisfying incidents. These were inadequate "responsibility," "content of work," "achievement," "recognition," and "advancement."

The findings here indicate that the hygiene factors contributed in large measure to the feeling of exceptional dissatisfaction to educators in Rehabilitation Medicine in Canada.

Sub-problem 2.2

"Is there any consistency between these incidents and the motivator-hygiene dichotomy of Herzberg et al. (1959)?"

The purpose of this sub-problem was to examine whether or not the job aspects identified in the critical incidents narrated by the respondents as contributing to their feeling of exceptional satisfaction were different from, rather than opposite of, the job aspects identified in the critical incidents narrated as contributing to their feeling of exceptional dissatisfaction.

The following procedures were followed: The frequencies and percentage distribution for each of the job aspects which were identified

in the two parts of the narrative section of the questionnaire were computed and are presented together in Table 17.

Table 17

Frequency and Percentage Distribution of Job Aspects Appearing in Critical Incidents Contributing to Job Satisfaction and Dissatisfaction

Job Aspect		Frequency of Mention			
		As Source of Satisfaction		As Source of Dissatisfaction	
		f	%	f	%
Recognition	(M)	64	20.2	3	0.9
Achievement	(M)	49	15.5	8	2.5
Content of work	(M)	22	6.9	14	4.4
Advancement	(M)	8	2.5	1	0.3
Responsibility	(M)	4	1.3	15	4.7
Interpersonal relationship with students	(H)	12	3.8	4	1.3
Cont[illegible] of work	(H)	1	0.3	33	10.4
Interpersonal relationship with peers	(H)	0	0.0	22	6.9
Policies and administration	(H)	0	0.0	29	9.
Reward system	(H)	0	0.0	12	3.8
Constraints in personal life	(H)	2	0.6	14	4.4
Total		162	51.1	155	48.9

Note: The abbreviations M = motivator; H = hygiene.

The frequency that each job aspect was associated with the time when the respondents felt exceptionally satisfied with their job was tabulated opposite the frequency that the same job aspect was associated with the

time when the respondents felt exceptionally dissatisfied with their job.

The chi-square "goodness of fit" analysis was employed to test the significance of the juxtaposed frequencies and to determine if the job aspects were associated differently with satisfying and dissatisfying critical incidents as presented in Table 18.

Table 18

Chi Square Analysis for Relationship Between the Motivators and Hygienes in the Critical Incidents

Characteristics	Number of Incidents Cited					
	As Sources of Satisfaction		As Sources of Dissatisfaction		Row Total	
	f	%	f	%		%
Motivator	147	90.7	41	26.5	188	59.3
Hygiene	15	9.3	114	73.5	129	40.7
Column Total	162		155		317	

Corrected X^2 = 133.00 df = 1
phi = 0.65 p = 0.0000

A chi-square value of 133.00 was obtained. This value was significant beyond .01 level. A phi coefficient of 0.65 was also obtained which, according to Garlington and Shimota (1964:95), suggested an "intense relationship." These values indicate that job aspects associated with job satisfaction were different from those associated with job dissatisfaction.

Three motivators "recognition," "achievement" and "content of work"

were found to be mentioned significantly more frequently in the satisfying critical incidents than in the dissatisfying critical incidents.

Similarly, the hygiene factors: "context of work," "policies and administration," "interpersonal relationship with peers," "constraints in personal life," and "reward system" were mentioned significantly more frequently in the critical incidents associated with the feeling of exceptional dissatisfaction than exceptional satisfaction.

Taking the motivators as a group and the hygienes as another as shown in Table 18, it was observed that in the critical incidents associated with satisfaction the motivators as a group were identified with a frequency of 90.7 percent while the hygienes as a group were identified in 9.3 percent. On the other hand, hygiene factors were identified in 73.5 percent of the critical incidents associated with job dissatisfaction compared to the identification of motivators as a group in 26.5 percent of the critical incidents.

In summary, these results show that among educators in Rehabilitation Medicine in Canadian universities, motivators were alluded to almost ten times as frequently as hygienes when describing satisfying incidents. Hygienes were alluded to about three times as much as motivators in the description of dissatisfying incidents.

Chapter VII

OVERALL JOB SATISFACTION AND THE DEMOGRAPHIC VARIABLES

Introduction

The data analyses relevant to problems 3 and 4 are reported in this chapter. The purpose of research problem 3 was to determine if there existed in Canadian universities, sub-groups of educators in Rehabilitation Medicine who had different patterns of job satisfaction scores. In the measurement of overall job satisfaction, Weiss (1976:327) recommends that:

> Rather than treat job satisfaction as a global variable, more information is made available for practical use if job satisfaction can be seen in terms of an individual's satisfaction with his pay, his supervision, working conditions, or the amount of variety his job provides.

In the conceptual framework for this study, overall job satisfaction was described as a multi-faceted unitary entity. The researcher adopted Weiss's (1976) recommendation, employing factor analysis in order to reduce the 31 job facets on the questionnaire into smaller, more easily interpretable factors underlying the concept of overall job satisfaction. The factors were used together with the overall satisfaction measures in exploring differences among sub-groups of the respondents. Overall job satisfaction was used in the primary analysis, while the factors were used in the secondary analysis. Tertiary analysis on the job facets produced additional significant results which are included in the summary tables in Appendix E.

Factor Analysis

To determine the underlying factors present in the 31 job facets on the questionnaire, a factor analysis with VARIMAX rotation was performed as recommended by Weiss (1976:355).

Nine factors, all with eigenvalues higher than 1.0 were extracted and they accounted for 69.4 percent of the total variance. The eigenvalues ranged from 7.56 to 1.12. After rotation the nine factors accounted for 40.5 percent, 11.6 percent, 10.9 percent, 9.4 percent, 7.4 percent, 5.8 percent, 5.3 percent, 5.1 percent and 4.0 percent of the common variance respectively. The factors were assigned names which were suggestive of the principal quality that the correlated facets had in common.

Identification of Factors

In naming the factors the following decision rules were established:

1) Items loading .40 or higher were considered to be primary sources of description of the factors, while items loading below .40 were considered as secondary sources.

2) Where any item loaded on more than one factor the meaning of the item was regarded as no longer simple since according to Nie et al. (1975:475) such a variable was measuring "more than one theoretical dimension."

3) Cattell's (1952:336) assertion that "if a loading is not much above 0.50, it is not possible to consider the factor as being highly characterized by that particular variable," was adopted for any item which loaded on two factors. Therefore, any item which loaded on

two factors was considered salient only to the factor where its loading was at or above .50, but the item was not dropped from the second factor on which its loading was at least .40.

4) Items which load on a factor should be subject to meaningful interpretation and should be seen to have a logical fit into the factor in order to contribute to the naming of the factor.

Following the established decision rules, the nine factors were named after independent evaluations by five judges. These judges were almost in complete agreement regarding the names of the factors except for factor six. The complete factor solution is shown in Table 19 to two decimal places. Three items did not load on any of the factors. They were "the salary you receive," "methods used in determining promotion and tenure" and "availability of library and audiovisual resources."

The names of the nine factors and the items loading .40 or higher on the nine factors are shown in Table 20. The descriptions of the nine factors are provided below.

Factor 1: Working conditions. The working conditions in a university are determined, to a large extent, by the number of hours of teaching per week, the time available for lecture preparations, the number of non-teaching duties that faculty members have to carry and the opportunity to carry out some research. The physical conditions of the lecture rooms and laboratories may have some impact on the working conditions.

Factor 2: Content of work. The content of work is described to the extent that it provides opportunities to use one's knowledge and skill, use one's initiative, engage in research, grow professionally and

Table 19

Varimax Factor Solution for 31 Weighted Job Satisfaction Variables Using Nine Factors

Satisfaction Item	Factor and Factor Loadings (× 100)									Communality (× 100)
	1 Working Conditions	2 Content of Work	3 Administration Involvement	4 Benefits	5 Environmental Support	6 Work Ethos	7 Teaching Autonomy	8 Accomplishment	9 Altruism	
Number of hours teaching	80	07	07	-07	07	-00	18	09	-01	70
Time available for lecture preparation	78	06	-00	12	-01	00	01	06	04	64
Number of non-teaching duties performed	58	00	12	25	11	17	06	08	23	53
Physical classroom/lab conditions	40	25	03	13	36	03	03	25	09	44
Opportunity to do research	46	58	07	-02	13	20	-27	-01	03	68
Opportunity to use knowledge and skill	06	86	21	12	12	06	18	15	02	80
Opportunity to use initiative	-05	72	18	11	18	18	14	09	-02	66
Opportunity for professional growth	18	71	-05	06	16	05	-03	-06	22	63
Intellectual stimulation in work	-04	55	04	08	-09	49	30	12	17	70
Participation in decision making	-08	15	89	04	-03	-01	08	03	10	85
Relationship with administrator(s)	21	07	76	03	14	08	01	-02	-07	66
Research and publications in salary increments	11	22	43	13	-08	27	-36	31	-21	51

Table 19

(Continued)

Satisfaction Item	Factor and Factor Loadings (× 100)									Communality (× 100)
	1 Working Conditions	2 Content of Work	3 Administration Involvement	4 Benefits	5 Environmental Support	6 Work Ethos	7 Teaching Autonomy	8 Accomplishment	9 Altruism	
Policies regulating sabbatical leave	16	00	03	[59]	08	02	-16	02	11	42
Feeling of job security	02	-00	09	[57]	-03	23	07	17	05	43
Prospects of comfortable retirement	01	29	05	[54]	10	01	02	13	24	47
Availability of useful advice as necessary	14	36	26	-03	[69]	11	-02	12	22	77
Provision for sick leave	10	16	-20	38	[47]	07	11	11	-00	47
Congeniality of professional colleagues	-04	18	09	02	[50]	[67]	07	13	12	79
Minimum acceptable student performance	11	17	03	22	-04	[56]	16	07	10	45
Status accorded to therapy educators	25	32	10	13	15	[40]	-35	06	31	61
Assigned course to teach	16	22	05	-09	-00	03	[60]	25	-09	52
Freedom to select subject matter	05	05	02	06	05	15	[59]	-02	09	39
Sense of responsibility of of students	-06	-06	01	21	18	06	09	[66]	00	53
Recognition of own work	25	21	08	-06	-04	09	-08	[53]	26	48
Relationship with students	03	08	-07	[43]	23	11	18	[52]	-03	56

Table 19

(Continued)

Satisfaction Item	Factor and Factor Loadings (÷ 100)									Communality (÷ 100)
	1 Working Conditions	2 Content of Work	3 Administration Involvement	4 Benefits	5 Environmental Support	6 Work Ethos	7 Teaching Autonomy	8 Accomplishment	9 Altruism	
Feeling of achievement	20	39	07	31	-01	15	15	[41]	25	57
Opportunity to help others find success	03	08	-01	25	27	29	15	17	[60]	64
Opportunity to do socially significant tasks	21	19	-10	27	07	13	-02	06	[49]	42
Promotion and tenure procedures	24	08	38	36	20	34	-12	21	-30	63
Availability of library and A/V resources	32	17	20	18	33	-16	-15	16	32	48
Salary	21	15	18	25	-14	-01	01	-08	20	23
Eigenvalues	7.62	2.47	2.30	2.05	1.77	1.50	1.33	1.29	1.18	
Percentage of Total Variance (69.4)	24.6	8.0	7.4	6.6	5.7	4.8	4.3	4.1	3.8	
Percentage of Common Variance (100.0)	40.5	11.6	10.9	9.4	7.4	5.8	5.3	5.1	4.0	

Table 20

Summary of Factors Extracted from the Factor Analysis

Factor	Job Facet Items	Loading	Percentage* of Total Variance
1. Working Conditions	Number of hours of teaching per week	.80	24.6
	Time available for lecture preparation	.78	
	Number of non-teaching duties performed	.59	
	Opportunity to do research	.46	
	Physical classroom/lab conditions	.40	
2. Content of Work	Opportunity to utilize knowledge and skill	.86	
	Opportunity to use initiative	.72	8.0
	Opportunity for professional growth	.71	
	Opportunity to do research	.58	
	Intellectual stimulation in work	.55	
3. Administrative Involvement	Participation in decision making	.89	
	Relationship with administrator(s)	.76	7.4
	Use of research and publication in determining salary increments	.43	
4. Benefits	Policies regulating sabbatical leave	.59	
	Feeling of job security	.57	6.6
	Prospects of comfortable retirement	.54	
	Relationship with students	.43	
5. Environmental Support	Availability of useful advice as necessary	.69	5.7
	Congeniality of professional colleagues	.50	
	Provision for sick leave	.47	

Table 20

(Continued)

Factor	Job Facet Items	Loading	Percentage* of Total Variance
6. Work Ethos	Congeniality of professional colleagues	.68	4.8
	Minimum acceptable level of student performance	.56	
	Intellectual stimulation in work	.49	
	Status accorded to educators in your profession within your university	.40	
7. Teaching Autonomy	Freedom to select subject matter	.59	4.3
	Assignment to teach courses	.60	
8. Accomplishment	Sense of responsibility of students	.66	4.1
	Recognition of your work	.53	
	Relationship with students	.51	
	Feeling of achievement	.41	
9. Altruism	Opportunity to help others find success	.60	3.8
	Opportunity to do socially significant tasks	.49	

* Total variance = 69.4

to the extent that it is not monotonous but a source of intellectual stimulation to the incumbent.

Factor 3: Administrative involvement. This refers to the interaction at work between the faculty member and the administrative personnel in decision making processes and in the assessment and evaluation of the faculty member for salary adjustment.

Factor 4: Benefits. By benefits is meant such fringe benefits as sabbatical leave, feeling of security on the job, a prospect of comfortable retirement as well as a feeling of good relationships with one's students.

Factor 5: Environmental support. An academic environment can be said to be supportive when the educator has easy access to useful advice as necessary, has congenial professional colleagues and provision is made for sick leave.

Factor 6: Work ethos. Work ethos relates to the practices in the academic community which are very much influenced by the congeniality of one's professional colleagues, the acceptable level of student performance, the intellectual stimulation present in the job itself and the social position accorded to the faculty member by others.

Factor 7: Teaching autonomy. This relates to the opportunity to teach in courses of one's interest and specialty as well as an opportunity for freedom of action to select the appropriate subject matter.

Factor 8: Accomplishment. In teaching, accomplishment is a function of the sense of responsibility demonstrated by the products, the amount of recognition shown for the work done, the evidence of good faculty-student relationships and the feeling of achievement.

Factor 9: Altruism. A professional is presumed to be altruistic (Cheek, 1967:11). This relates to the unselfish service provided to other members of the society. In this factor it relates to the extent to which the job provides the opportunity to help others find success and to do socially significant tasks.

PROBLEM 3: OVERALL JOB SATISFACTION AND DEMOGRAPHIC VARIABLES

In dealing with problem 3, sub-groups of subjects were formed based on the data provided by the respondents in section I of the questionnaire which was reported in Chapter V. The mean overall job satisfaction-scores and the mean satisfaction scores on each of the nine factors identified in the factor analysis were computed for the sub-groups. All computations were done using the SPSS program.

One-way analysis of variance was used to compare the mean scores of the different sub-groups on overall job satisfaction and on the factors. Where F value was found to be significant beyond the 0.05 level, the combination of sub-groups which accounted for the resulting differences was sought through the application of the Scheffé multiple comparison of means. The significance level for the Scheffé procedure was set at 0.10. A t-test was used where the mean scores of two groups were compared.

Three sub-problems were investigated under problem 3.

Sub-problem 3.1: Job Satisfaction and Personal Variables

"To what extent are there differences in overall job satisfaction between sub-groups of respondents formed on the basis of their pers-

onal variables?"

Sex. A measure of the mean overall job satisfaction score by sex was obtained from the responses to Section II of the questionnaire. Their mean scores by sex on the nine factors were also computed.

The results of the t-test comparing the two overall job satisfaction mean scores are presented in Table 21.

Table 21

Comparison of the Mean Overall Job Satisfaction Scores of Educators in Rehabilitation Medicine Grouped by Sex

Sex	Number of Respondents	Mean Score	Standard Deviation	Degrees of Freedom	t Value	2-Tail Probability
Female	74	6.13	3.40	92	-1.85	0.067
Male	20	7.65	2.67			

t.05 at 92 df = ± 1.98

The overall job satisfaction mean score for males was higher than that of the females. However, the difference between the two mean scores was not significant at the .05 level. It was concluded that no significant difference existed between the male and female respondents on their overall job satisfaction. The difference between their mean scores on factor 6, Work Ethos, was significant beyond the .05 level. Female respondents were significantly less satisfied than their male counterparts with regard to Work Ethos. The result of this analysis is presented in Table 22.

Table 22

Comparison of the Mean Satisfaction Scores on the Factor of Work Ethos of Educators in Rehabilitation Medicine Grouped by Sex

Sex	Number of Respondents	Mean Score	Standard Deviation	Degrees of Freedom	t Value	2-Tail Probability
Female	74	6.12	5.36	92	-2.27	0.028
Male	20	8.39	3.47			

t.05 at 92 df = ± 1.98

Age. Three age groups were formed comprising those aged under 40, 40-49 and over 49. The frequencies, mean overall job satisfaction scores and standard deviations for the age groups are shown in Table 23. The under-40 group had a lower overall job satisfaction mean score than the 40-49 group and the over-49 group. The mean score for the over-49 group was relatively lower than that of the 40-49 group.

Analysis of variance was used to test the significance of the observed mean differences. An F-value of 0.17 was obtained which was not significant at 0.05 level. It was concluded that there was no significant difference in the mean overall job satisfaction scores of the different age groups of educators in Rehabilitation Medicine in Canada.

Table 24, however, shows that the observed difference in the group mean scores on Factor 9, Altruism, was statistically significant. The F value of 3.40 was significant beyond the .05 level. The applica-

Table 23

Comparison of the Mean Overall Job Satisfaction Scores of Educators in Rehabilitation Medicine Grouped by Age

Age Group	Number of Respondents	Mean Scores	Standard Deviations	F Value	probability
Under 40	40	5.85	3.51	1.17*	0.3156
40 - 49	30	6.91	3.70		
Over 49	24	6.88	2.20		
Total	94	6.45	3.30		

*Note: With df = 2/29, F.05 $\geq$ 3.10

Table 24

Comparison of the Mean Satisfaction Scores on the Factor of Altruism of Educators in Rehabilitation Medicine Grouped by Age

Age Group	Number of Respondents	Mean Scores	Standard Deviations	F Value	probability	Groups Significantly Different[a] 1 2 3
1. Under 40	40	5.74	3.91	3.40*	0.0375	
2. 40 - 49	30	8.23	4.53			†
3. Over 49	24	6.90	3.21			
Total	94	6.83	4.06			

* Note: With df = 2/91, F.05 ≥ 3.10
[a] Scheffé Multiple Comparison of Means set at .10 level
† Groups 1 and 2 significantly different

tion of the Scheffé multiple comparison of means revealed that the under 40 group were significantly less satisfied with the factor of Altruism than the 40 - 49 age group.

Level of education. From the information provided in question 4 on Section I of the questionnaire, the respondents were grouped into three education categories. The first group consisted of those respondents whose highest educational qualification was a baccalaureate degree or less in their professional discipline. The second group comprised respondents who had teaching certificates in addition to their basic professional qualifications. The third group consisted of respondents who had a masters degree. Five respondents who had doctorates were combined with those holding the masters to constitute group three.

The means and standard deviations of the overall job satisfaction score for the three groups are presented in Table 25. The lowest mean score was reported by the baccalaureate group. The group with teaching certificates reported a higher mean score than the group with graduate degrees. When the mean scores were subjected to analysis of variance to test for significant differences, the obtained F value of 3.27 was significant at the .05 level as shown in Table 25. The Scheffé test showed that the overall job satisfaction mean score for the baccalaureate group was significantly less than that of the teaching certificate group.

Further analyses were carried out with regard to the nine factors which underlie overall job satisfaction. A statistically significant difference among means occurred on Factor 1; that is, Working Conditions. The results relating to Factor 1 are presented in Table 26.

Table 25

Comparison of the Mean Overall Job Satisfaction Scores of Educators in Rehabilitation Medicine Grouped by Levels of Education

Level of Education	Number of Respondents	Mean Scores	Standard Deviations	F Value	probability	Groups Significantly Different[a] 1 2 3
1. Baccalaureate	23	5.29	3.23	3.27*	0.0425	
2. Teaching Certificate	22	7.75	2.59			†
3. Masters Degree/ Doctorate	49	6.41	3.46			
Total	94	6.45	3.30			

* With df = 2/91, F.05 $\geq$ 3.10

Table 26

Comparison of the Mean Satisfaction Scores on the Factor of Working Conditions of Educators in Rehabilitation Medicine Grouped by Levels of Education

Levels of Education	Number of Respondents	Mean Scores	Standard Deviations	F Value	probability	Groups Significantly Different[a] 1 2 3
1. Baccalaureate	23	0.77	6.74	4.15*	0.0189	
2. Teaching Certificate and Professional Qualification	22	5.44	4.40			†
3. Masters Degree/ Doctorate	49	3.98	5.60			†
Total	94	3.53	5.85			

* With df = 2/91, F.05 ≥ 3.10
[a] Scheffé Multiple Comparison of Means set at 0.10 level
† Indicates groups significantly different

There was no statistically significant difference between the teacher's certificate group and the graduate degree group, but the baccalaureate group differed significantly from the other two groups on this variable. Therefore, it was concluded that in Rehabilitation Medicine educators who had only baccalaureates were significantly less satisfied with the working conditions in their respective employments than the rest of their professional colleagues who held higher academic qualifications.

Other significant differences in job facet satisfaction among the sub-groups of educators on the bases of their levels of education are summarized in Appendix E.1.

Sub-problem 3.2: Job Satisfaction and Organizational Variables

"To what extent are there differences in overall job satisfaction between sub-groups of respondents formed on the bases of their organizational variables?"

Academic rank. Three groups of educators in Rehabilitation Medicine in Canadian universities were formed based on their self-reported academic ranks. Table 27 shows the frequency, overall job satisfaction mean scores, and the standard deviations for the various ranks. The lowest overall job satisfaction mean score was reported by the Assistant Professor group. The Associate Professor/Professor group reported the highest overall job satisfaction mean score.

The significance of the difference among the mean scores was tested, using one-way analysis of variance. The obtained F value of 1.63 was not significant at the .05 level. That is, there was no significant difference in the levels of the mean overall job satisfaction among

Table 27

Comparison of the Mean Overall Job Satisfaction Scores of Educators in Rehabilitation Medicine Grouped by Academic Rank

Academic Rank	Number of Respondents	Mean Scores	Standard Deviations	F Value	probability
Below Assistant Professor	17	6.07	3.67	1.63*	0.2023
Assistant Professor	42	5.95	3.79		
Associate Professor/ Professor	35	7.24	2.26		
Total	94	6.45	3.30		

*Note: With df = 2/91, $F_{.05} \geq 3.10$

the various groups of educators in Rehabilitation Medicine based on their academic ranks.

The differences among the sub-groups of educators on the factors underlying overall satisfaction were explored. There was a significant difference found on Factor 4, Benefits. Table 28 shows that the lowest mean score on Benefits was reported by the group below the Assistant Professor rank. The mean scores also increased as the academic rank increased. When one-way analysis of variance was performed an F value of 6.93 was obtained which was significant beyond the .01 level. By applying the Scheffé multiple comparison of means, it was discovered that the Associate Professor/Professor group was significantly more satisfied with Benefits factor than were the other two groups.

Other significant differences in the job facet satisfaction among the sub-groups of educators in Rehabilitation Medicine on the bases of their academic rank are tabulated in Appendix E.

Salary. Four sub-groups of respondents were formed based on their self-reported salary scale for 1979/80 academic year. Table 29 shows that the lowest overall job satisfaction mean score was reported by those educators in Rehabilitation Medicine in Canada who earned $21,000. or less. The job satisfaction mean scores increased as the salary increased such that the highest job satisfaction mean score was reported by those educators whose salary was over $33,000.

The results of a one-way analysis of variance used to test the significance of the observed differences among the four sub-groups are also shown in Table 29. The obtained F value of 5.95 was significant beyond the .01 level, showing that there was a significant difference

Table 28

Comparison of the Mean Satisfaction Scores on the Factor of Benefits of Educators in Rehabilitation Medicine Grouped by Academic Rank

Academic Rank	Number of Respondents	Mean Scores	Standard Deviations	F Value	probability	Groups Significantly Different[a] 1	2	3
1. Below Assistant Professor	17	4.25	4.55	6.93*	0.0016			
2. Assistant Professor	42	5.82	4.93					
3. Associate Professor/ Professor	35	8.75	3.91				†	†
Total	94	6.63	4.79					

* With df = 2/91, $F_{.05} \geq 3.10$
[a] Scheffé Multiple Comparison of Means set at 0.10 level
† Indicates groups significantly different

Table 29

Comparison of the Mean Overall Job Satisfaction Scores of Educators in Rehabilitation Medicine Grouped by Salary Scale

Salary Scale	Number of Respondents	Mean Scores	Standard Deviations	F Value	probability	Groups Significantly Different[a] 1 2 3 4
1. $21,000. or less	19	5.38	2.96	5.95*	0.0009	
2. $21,001 - $27,000.	38	5.51	3.73			
3. $27,001 - $33,000.	24	7.33	2.49			
4. Over $33,000.	13	9.13	1.61			† †
Total	94	6.45	3.30			

* With df = 2/91, F.05 = 3.10; F.01 = 4.85
[a] Scheffé Multiple Comparison of Means set at 0.10 level
† Indicates groups significantly different

in the levels of overall job satisfaction among the sub-groups of educators based on their salary.

Scheffé's multiple comparison of means was used to identify the sub-groups which were different. It was found as shown in Table 29 that the overall job satisfaction mean score for those educators whose salary was $21,000. or less, was significantly lower than the mean score for those educators whose salary was over $33,000. The overall job satisfaction mean score for the $21,001. - $27,000. group was also significantly lower than the mean score for the educators whose salary was over $33,000. Therefore, it was concluded that the two sub-groups of educators whose salaries were below $27,000. had significantly lower overall job satisfaction than those educators whose salary was over $33,000. The overall satisfaction mean score of the group whose salary was $27,001. - $33,000. was not significantly different from those of the other three groups.

Secondary analyses showed that there were significant differences among the sub-groups on two of the nine job satisfaction factors, namely Benefits and Altruism

Factor 4: Benefits. With regard to Benefits, it was observed that the satisfaction mean scores for this factor increased as the salary scale increased such that the highest mean score was reported by the sub-group of educators whose salary was over $33,000. The results of a one-way analysis of variance to test the significance of the observed differences among the mean scores are presented in Table 30. An F value of 6.93 was obtained and it was significant beyond the .01 level.

When Scheffé's multiple comparison of means was applied it was found that no significant difference existed in the mean satisfaction

Table 30

Comparison of the Mean Satisfaction Scores on the Factor of Benefits of Educators in Rehabilitation Medicine Grouped by Salary Scales

	Benefits Satisfaction					
Salary Scale	Number of Respondents	Mean Scores	Standard Deviations	F Value	probability	Groups Significantly Different[a] 1 2 3 4
1. $21,000. or less	19	4.51	4.30	6.93*	0.0003	
2. $21,001. - $27,000.	38	5.51	4.48			
3. $27,001. - $33,000.	24	7.74	5.00			
4. Over $33,000.	13	10.90	2.58			† †
Total	94	6.63	4.79			

* With df = 3/90, F.05 ≥ 2.71, F.01 ≥ 4.01
[a] Scheffé Multiple Comparison of Means set at 0.10 level
† Indicates groups significantly different

score on this factor among the three groups whose salary was below $33,000. The group whose salary was over $33,000. was significantly more satisfied than the two groups whose salaries were $21,000. or less and $21,001. - $27,000. respectively. It was concluded that educators whose salaries were higher than $33,000. were significantly more satisfied with their fringe benefits than those educators whose salaries were below $27,000.

Factor 9: Altruism. With respect to Altruism, the mean satisfaction score on this factor increased as the salary scale increased such that the lowest mean score was reported by the sub-group of educators whose salary was $21,000. or less while the highest mean score was reported by those whose salary was over $33,000. The F value of 4.21 with the associated probability beyond .01 indicated a statistically significant difference between the means. These are shown in Table 31.

By use of Scheffé's multiple comparison of means, it was found that the group of educators whose salary was $21,000. or less was significantly less satisfied with respect to the factor of Altruism than the group whose salary was above $33,000.

Primary involvement. In order to examine the differences in job satisfaction among educators based on their areas of primary involvement, three groups were formed on the basis of the respondents' reported area of commitment of more than 60 percent of their time on the job. The frequencies, mean scores and standard deviations of the respondents relative to each of the three groups are summarized in Table 32.

Differences existed in the mean overall job satisfaction scores among the three groups. One-way analysis of variance indicated that the

Table 31

Comparison of the Mean Satisfaction Scores on the Factor of Altruism of Educators in Rehabilitation Medicine Grouped by Salary Scales

Salary Scale	Number of Respondents	Altruism Satisfaction Mean Scores	Standard Deviations	F Value	probability	Groups Significantly Different[a] 1 2 3 4
1. $21,000. or less	19	4.76	3.59	4.21*	0.0078	
2. $21,001. - $27,000.	38	6.51	6.51			
3. $27,001. - $33,000.	24	7.52	7.52			
4. Over $33,000.	13	9.50	9.50			†
Total	94	6.83	6.83			

* With df = 3/90, F.05 ≥ [illegible], F.01 ≥ 4.01
[a] Scheffé Multiple Compa[illegible] of Means set at 0.10 level
† Indicates groups significantly different

Table 32

Comparison of the Mean Overall Job Satisfaction Scores of Educators in Rehabilitation Medicine Grouped by Areas of Primary Involvement

Area of Primary Involvement	Number of Respondents	Mean Scores	Standard Deviations	F Value	probability
Administration	11	8.02	1.92	1.514*	0.2256
Teaching	34	6.06	3.01		
Mixed Involvement	49	6.37	3.67		
Total	94	6.44	3.30		

*Note: With df = 2/91, $F_{.05} \geq 3.10$

observed differences among the groups were not statistically significant at .05 level. Therefore it was concluded that there were no significant differences in overall job satisfaction among the group of educators based on their areas of primary commitment of time.

When secondary analyses were carried out to investigate the differences in satisfaction on the nine factors, there was a significant difference in the level of satisfaction expressed by the three groups in relation to Factor 4, Benefits. As shown in Table 33, the predominantly "administration" group had the highest mean score on this factor followed by the predominantly "teaching" group.

Analysis of variance was carried out to compare the differences between the means. An F value of 3.26 was obtained which was significant beyond the .05 level. When the Scheffé multiple comparison of means was applied, it was found that there was a significant difference between the predominantly "administrative" group and the "mixed" group. All other differences were not significant. The conclusion was that the predominantly administrative group were significantly more satisfied with the Benefits than the mixed group.

Years in present employment. From the data provided by the respondents four groups of educators were formed based on the number of years they had spent in their current department/school. The frequencies, mean overall satisfaction scores and standard deviations for the groups are shown in Table 34. Some differences seemed to exist between the means.

A one-way analysis of variance was computed to test the significance of the observed differences in mean overall job satisfaction

Table 33

Comparison of the Mean Satisfaction Scores on the Factor of Benefits of Educators in Rehabilitation Medicine Grouped by Areas of Primary Involvement

Area of Primary Involvement	Number of Respondents	Benefits Satisfaction Mean Scores	Standard Deviations	F Value	probability	Groups Significantly Different[a] 1 2 3
1. Administration	11	9.68	2.88	3.26*	0.04	
2. Teaching	34	6.89	4.49			
3. Mixed Involvement	49	5.76	5.08			†
Total	94	6.63	4.79			

* With df = 3/90, F.05 ≥ 3.10
[a] Scheffé Multiple Comparison of Means set at 0.10 level
† Indicates groups significantly different

Table 34

Comparison of the Mean Overall Job Satisfaction Scores of Educators in Rehabilitation Medicine Grouped by Years in Present Employment

Years in Present Employment	Number of Respondents	Mean Scores	Standard Deviations	F Value	probability	Groups Significantly Different[a] 1 2 3 4
			Overall Job Satisfaction			
1. 1 - 2	17	7.14	3.91	3.04*	0.0332	
2. 3 - 5	19	4.65	3.90			
3. 6 - 9	20	6.14	2.99			
4. 10 and over	38	7.20	2.51			†
Total	94	6.45	3.30			

* With df = 3/90, F.05 $\geq$ 2.71
[a] Scheffé Multiple Comparison of Means set at 0.10 level
† Indicates groups significantly different

scores. As shown in Table 34, an F value of 3.04 was obtained which was statistically significant at the .05 level. The application of Scheffé's multiple comparison of means identified that the 3 - 5 years group was significantly less satisfied than the "10 and over" group.

When further analyses were carried out using the nine satisfaction factors, factors 1, 4 and 5 produced significant differences among the groups.

Factor 1: Working conditions. As shown in Table 35, the highest group mean score on this factor was reported by those who had spent no more than two years in their present department. It appeared that satisfaction with this factor was high during the first and second years and for the third to the fifth years, the level of satisfaction was low. From the sixth year onwards, the mean scores on this variable increased as the number of years in employment increased.

One-way analysis of variance showed that the obtained ratio of 2.79 was significant beyond the .05 level. This meant that significant differences existed among the group means. The application of Scheffé's multiple comparison of means revealed that the mean score of the educators in the 3 - 5 year group was significantly less than the mean of the 1 - 2 year group. The respondents who were in their first or second year were significantly more satisfied than the respondents who were in their third to fifth year in their departments or schools. The other observed group differences were not statistically significant.

Factor 4: Benefits. Table 36 shows that from the fifth year onwards, the Benefit satisfaction mean score tended to increase with the respondents' years in employment. The group of respondents who

Table 35

Comparison of the Mean Satisfaction Scores on the Factor of Working Conditions of Educators in Rehabilitation Medicine Grouped by Years in Present Employment

Years in Present Employment	Number of Respondents	Mean Scores	Standard Deviations	F Value	probability	Groups Significantly Different[a] 1 2 3 4
1. 1 - 2	17	6.72	4.52	2.79*	0.0451	
2. 3 - 5	19	1.46	6.14			†
3. 6 - 9	20	2.63	6.94			
4. 10 and over	38	3.62	5.17			
Total	94	3.53	5.85			

* With df = 3/90, $F.05 \geq 2.71$
[a] Scheffé Multiple Comparison of Means set at 0.10 level
† Indicates groups significantly different

Table 36

Comparison of the Mean Satisfaction Scores on the Factor of Benefits of Educators in Rehabilitation Medicine Grouped by Years in Present Employment

Years in Present Employment	Benefits Satisfaction: Number of Respondents	Mean Scores	Standard Deviations	F Value	probability	Groups Significantly Different[a] 1 2 3 4
1. 1 - 2	17	5.72	4.48	4.28*	0.0072	
2. 3 - 5	19	3.83	4.90			
3. 6 - 9	20	6.95	5.00			
4. 10 and over	38	8.26	4.15			†
Total	94	6.63	4.79			

* With df = 3/90, F.05 ≥ 2.71; F.01 ≥ 4.01
[a] Scheffé Multiple Comparison of Means set at 0.10 level
† Indicates groups significantly different

had 10 years and over in present employment reported the highest mean satisfaction score on this factor, while the 3 - 5 year group reported the lowest mean satisfaction score.

One-way analysis of variance was used to test the significance of the observed differences between the means. The obtained F-ratio of 4.28 was significant beyond the .01 level. That is, there was a significant difference in the mean satisfaction reported on the Benefits factor among sub-groups of educators in Rehabilitation Medicine who had spent different numbers of years in their respective departments/schools. Scheffé's multiple comparison of means was used to identify the specific sub-groups which were different. It was found that a significant difference in the mean score existed between those educators who had 3 - 5 years compared to those whose years in present employment were 10 years and over. The 3 - 5 year group were significantly less satisfied with this factor than the 10 and over group. However, no differences existed relative to the 1 - 2 and 6 - 9 year groups.

Factor 5: Environmental support. The findings on this factor were similar to those reported above in Factor 4. Presented in Table 37 are the frequencies, mean scores on satisfaction with Environmental Support and the standard deviations for the various groups of Rehabilitation Medicine educators with respect to the number of years in their current employment. The highest mean score was reported by the 10 and over group. The 3 - 5 year group reported the lowest mean score on this factor.

One-way analysis of variance was computed. The results produced an F-ratio of 3.86 which was significant beyond the .05 level. Therefore,

Table 37

Comparison of the Mean Satisfaction Scores on the Factor of Environmental Support of Educators in Rehabilitation Medicine Grouped by Years in Present Employment

Years in Present Employment	Number of Respondents	Mean Scores	Standard Deviations	F Value	Probability	Groups Significantly Different[a] 1 2 3 4
1. 1 - 2	17	8.59	4.75	3.86*	0.0119	
2. 3 - 5	19	4.47	7.90			
3. 6 - 9	20	8.07	4.26			
4. 10 and over	38	9.21	3.59			†
Total	94	7.90	5.29			

* With df = 3/90, F.05 ≥ 2.71
[a] Scheffé Multiple Comparison of Means set at 0.10 level
† Indicates groups significantly different

statistically significant differences existed among the four groups of educators. The Scheffé test showed that the difference between the 3 - 5 group and the 10 and over group was significant. An inspection of the means, indicated that the 3 - 5 group were significantly less satisfied with the Environmental Support factor than the group with 10 or more years in their current employment.

Sub-problem 3.3: Job Satisfaction and Professional Variables

"To what extent are there differences in overall job satisfaction among sub-groups of respondents formed on the bases of their professional variables: total years of experience, number of publications and number of presentations?"

Total years of teaching experience. From the respondents' data on their total years of teaching experience, four groups were formed. Table 38 presents the group frequencies, the group mean scores and standard deviations on their overall job satisfaction. The lowest mean score was reported by those educators in the group with 3 - 5 years of teaching experience, while the highest mean overall job satisfaction was reported by educators who had at least 10 years of teaching experience.

One-way analysis of variance was carried out to test the significance of the observed differences in the group mean scores. The F-ratio of 2.55 obtained in the analysis was not significant at the .05 level. Therefore, it was concluded that there were no significant differences in the levels of overall job satisfaction among the groups of educators based on their total number of years of teaching experience.

However, when secondary analysis was carried out to seek for

Table 38

Comparison of the Mean Overall Job Satisfaction Scores of Educators in Rehabilitation Medicine Grouped by Total Years of Teaching Experience

Total Years of Teaching Experience	Overall Job Satisfaction				
	Number of Respondents	Mean Scores	Standard Deviations	F Value	probability
1 - 2	17	5.48	4.50	2.55*	0.0605
3 - 5	15	5.08	3.71		
6 - 9	21	6.40	2.85		
10 and over	41	7.38	2.53		
Total	94	6.45	3.30		

* With df = 3/90, $F.05 \geq 2.71$

any differences among the groups based on the nine factors which underlie overall job satisfaction, factors 4, 5 , 6 and 9 showed significant differences. Those are reported below.

Factor 4: Benefits. Table 39 shows that the group mean scores increased as the total number of years of teaching experience increased. The group with a total experience of 10 years and over reported the highest mean score on this factor.

The observed differences in the mean scores were tested by one-way analysis of variance. The resulting F value of 4.05 was significant at the .01 level. That showed that a significant difference existed in the group mean scores. The Scheffé multiple comparison of means revealed that there was a significant difference between the 1 - 2 year group and and 10 years and over group. The observed differences between the other groups were not statistically significant. The conclusion was that the 10 years and over group were significantly more satisfied with the Benefits factor than the 1 - 2 year group.

Factor 5: Environmental support. An examination of Table 40 shows that the lowest mean score on the Environmental Support factor was reported by those educators in the 3 - 5 years group. The highest mean is reported by those educators who have at least 10 years of teaching experience.

The significance of the differences in the observed group means was tested by using one-way analysis of variance. The F-value of 4.16 was significant beyond the .01 level. That is, there were significant differences in the group mean scores. On application of the Scheffé test of multiple comparison of means, it was found that the mean score

Table 39

Comparison of the Mean Satisfaction Scores on the Factor of Benefits of Educators in Rehabilitation Medicine Grouped by Total Years of Teaching Experience

	Benefits Satisfaction					
Total Years of Teaching Experience	Number of Respondents	Mean Scores	Standard Deviations	F Value	Probability	Groups Significantly Different[a] 1 2 3 4
1. 1 - 2	17	4.68	4.59	4.05*	0.0095	
2. 3 - 5	15	5.32	3.87			
3. 6 - 9	21	5.55	5.77			
4. 10 and over	41	8.46	4.07			†
Total	94	6.63	4.79			

* With df = 3/90, F.05 ≥ 2.71; F.01 ≥ 4.01
[a] Scheffé Multiple Comparison of Means set at 0.10 level
† Indicates groups significantly different

Table 40

Comparison of the Mean Satisfaction Scores on the Factor of Environmental Support of Educators in Rehabilitation Medicine Grouped by Total Years of Teaching Experience

Total Years of Teaching Experience	Number of Respondents	Mean Scores	Standard Deviations	F Value	probability	Groups Significantly Different[a] 1 2 3 4
		Environmental Support				
1. 1 - 2	17	7.24	6.13	4.16*	0.0082	
2. 3 - 5	15	4.04	7.58			
3. 6 - 9	21	8.44	4.35			†
4. 10 and over	41	9.30	3.53			†
Total	94	7.90	5.29			

* With df = 3/90, F.05 ≥ 2.71; F.01 ≥ 4.01
[a] Scheffé Multiple Comparison of Means set at 0.10 level
† Indicates groups significantly different

of the 3 - 5 years group was significantly lower than those of the two groups with the most experience; that is, the 6 - 9 years and 10 years and over groups. There were no significant differences between the 1 - 2 year group and the other groups on this factor.

Factor 6: Work ethos. The total years of teaching experience and group mean scores on satisfaction with Work Ethos are presented in Table 41. The mean scores on this factor tended to increase with the number of years of teaching experience.

One-way analysis of variance was computed to test the significance of the apparent mean differences among the groups. The results show that an F-ratio of 3.31 was significant beyond the .05 level. That is, there was a significant difference in the level of satisfaction with the Work Ethos among the groups of educators.

Scheffé's multiple comparison of means was employed to identify the specific differences between the sub-groups. There was a significant difference in group means between the 1 - 2 and the 10 and over groups such that the latter were significantly more satisfied than the former. All other comparisons did not show significant differences.

Factor 9: Altruism. As shown in Table 42, the lowest mean score on this factor was reported by the 3 - 5 year group. The group of educators who had at least 10 years of teaching experience reported the highest mean satisfaction score on this factor.

From the analysis of variance carried out to test the significance of the mean score differences, an F-ratio of 3.55 was obtained. This was significant beyond the .05 level. That is, there was a significant difference in the mean scores among the four groups. The Scheffé multiple comparison of means test showed that a significant difference

Table 41

Comparison of the Mean Satisfaction Scores on the Factor of Work Ethos of Educators in Rehabilitation Medicine Grouped by Total Years of Teaching Experience

Total Years of Teaching Experience	Work Ethos: Number of Respondents	Mean Scores	Standard Deviations	F Value	probability	Groups Significantly Different[a] 1 2 3 4
1. 1 - 2	17	4.26	6.57	3.31*	0.0235	
2. 3 - 5	15	4.70	5.85			
3. 6 - 9	21	6.95	4.75			
4. 10 and over	41	8.08	3.69			†
Total	94	6.60	5.09			

* With df = 3/90, F.05 ≥ 2.71
[a] Scheffé Multiple Comparison of Means set at 0.10 level
† Indicates groups significantly different

Table 42

Comparison of the Mean Satisfaction Scores on the Factor of Altruism of Educators in Rehabilitation Medicine Grouped by Total Years of Teaching Experience

Total Years of Teaching Experience	Number of Respondents	Mean Scores	Standard Deviations	F Value	probability	Groups Significantly Different[a] 1 2 3 4
		Altruism Satisfaction				
1. 1 - 2	17	5.62	4.26	3.55*	0.0175	
2. 3 - 5	15	4.53	4.04			
3. 6 - 9	21	7.17	3.84			
4. 10 and over	41	8.00	3.74			†
Total	94	6.83	4.06			

* With df = 3/90, F.05 ≥ 2.71
[a] Scheffé Multiple Comparison of Means set at 0.10 level
† Indicates groups significantly different

existed in the mean scores between the 3 - 5 year group and the 10 and over group. It was concluded that the group of educators who had at least 10 years of teaching experience were significantly more satisfied with the Altruism aspect of their job than the 3 - 5 year group.

Number of publications. Publication was used as one indicator of productivity in order to examine the differences in job satisfaction among educators in Rehabilitation Medicine who might differ in this aspect of productivity. Three groups were formed based on the data on the number of publications in refereed journals in the last five years. The frequencies, mean overall job satisfaction scores and standard deviations for the three groups are presented in Table 43. The lowest mean overall job satisfaction score was reported by the group of educators who had one or two publications. The mean score for the group who had no publications was lower than the mean score for the group who had three or more publications. One-way analysis of variance was used to test the significance of the differences among the groups. An F-ratio of 1.09 was not significant at the .05 level. This showed that no significant difference existed in the level of overall job satisfaction among the three groups.

When secondary analyses were carried out using the nine factors underlying overall job satisfaction there was a significant difference among the groups on Factor 2, Content of Work. This difference was accounted for essentially by "the opportunity to do research" (Questionnaire Item 43).

The results of the analysis relating to Factor 2 are presented in Table 44. The lowest mean score on this factor was reported by the

Table 43

Comparison of the Mean Overall Job Satisfaction Scores of Educators in Rehabilitation Medicine Grouped by Number of Publications

Number of Publications	Overall Job Satisfaction				
	Number of Respondents	Mean Scores	Standard Deviations	F Value	probability
None	49	6.29	3.15	1.09	0.3409
1 - 2	21	5.88	3.59		
3 or more	24	7.26	3.35		
Total	94	6.45	3.30		

* With df = 2/91, F.05 $\geq$ 3.10

Table 44

Comparison of the Mean Satisfaction Scores on the Factor of the Content of Work of Educators in Rehabilitation Medicine Grouped by Number of Publications

Number of Publications	Content of Work Satisfaction: Number of Respondents	Mean Scores	Standard Deviations	F Value	probability	Groups Significantly Different[a] 1 2 3
1. None	49	7.30	4.77	3.49*	0.0347	
2. 1 - 2	21	5.31	2.21			
3. 3 or more	24	9.60	5.00			†
Total	94	7.44	5.60			

* With df = 2/91, $F_{.05} \geq 3.10$
[a] Scheffé Multiple Comparison of Means set at 0.10 level
† Indicates groups significantly different

group with 1 - 2 publications, while the highest mean score was reported by the group with 3 or more publications. The F-ratio obtained in Table 44 was significant beyond the .05 level. That is, there was a significant difference in the mean scores among the three groups. The Scheffé multiple comparison of means test revealed that the group with three or more publications were significantly more satisfied with the Content of Work factor than the group with one or two publications only.

Some significant differences on two job facets were found among educators grouped according to their publications. These differences are tabulated and included in Appendix E.3.

Number of presentations. Another indicator of productivity utilized to seek for differences among educators in Rehabilitation Medicine in Canada was the number of papers presented at professional/ scientific meetings in the last five years. From the respondents' data on the number of papers presented, three groups were formed. The presentation frequencies of each group, mean overall job satisfaction scores, F-ratio and probability are reported in Table 45. The "none" presentor group reported the lowest overall job satisfaction mean score. The highest overall satisfaction mean score was reported by the group of educators who had at least three presentations. One-way analysis of variance showed that with an F-ratio of 1.01, the observed differences in the mean satisfaction of the groups were not statistically significant at .05 level.

When secondary analyses were carried out using the nine factors underlying overall job satisfaction as the dependent variables, no significant differences existed among the groups of educators who had

Table 45

Comparison of the Mean Overall Job Satisfaction Scores of Educators in Rehabilitation Medicine Grouped by the Number of Presentations

Number of Presentations	Number Respondents	Mean Scores	Standard Deviations	F Value	probability
None	33	5.81	3.09	1.01*	0.3689
1 - 2	27	6.65	3.38		
3 and over	34	6.91	3.43		
Total	94	6.45	3.30		

* F.05 = 3.10

varying number of presentations. There were, however, significant differences among the groups in the level of satisfaction on two job facets. These differences are summarized and included in Appendix E.4.

PROBLEM 4: JOB SATISFACTION AND MOBILITY

Sub-problem 4.1

"What is the difference in the level of overall job satisfaction between mobile and non-mobile educators in Rehabilitation Medicine in Canadian universities?"

The data presented in Table 46 show that the non-mobiles had a higher overall satisfaction mean score than the mobiles. The t-test on the mean scores produced a t-value of 0.51 which was not significant at the .05 level. It was concluded that no significant difference existed between the overall job satisfaction mean scores of mobile and non-mobile educators.

No significant difference was observed in the mean satisfaction scores on any of the nine factors considered separately. However, one significant difference on the job facet, "Recognition of your work by others" is summarized and included in Appendix E.5.

Sub-problem 4.2

"What job characteristics were identified by the mobiles as contributory to their decisions to move?"

In order to identify the specific reasons for mobility, the mobile respondents were provided a list of 15 job characteristics which were identified in literature as potentially influential in the

Table 46

Comparison of the Mean Overall Job Satisfaction Scores of Educators in Rehabilitation Medicine Grouped by Mobility Characteristics

Mobility Characteristics	Number Respondents	Mean Scores	Standard Deviations	DF	t Value	2-Tail probability
Non-mobile	68	6.57	2.94	92	0.51*	0.616
Mobile	26	6.12	4.16			
Total	94					

*t.05 at 92 df = ± 1.98

"select-versus-reject" decisions among typical professionals (Brown, 1967:149). Respondents were asked to select the five most important job characteristics from the list and to rank order those five to the extent that they contributed to their decision to move.

The frequency with which the 15 job characteristics were selected, together with the "weighted response" which shows their relative importance to the respondents are summarized in Table 47.

The global entity - "The attraction of the new position," was of prime importance to the mobiles. The specificity of the attraction of the new position lay in the next four job characteristics which were second to fifth. For most mobile educators in Rehabilitation Medicine in Canadian universities "opportunity for research," "opportunity for further professional education" and "adequate recognition" had the strongest influence upon their decision to move. Other job characteristics such as "poor policies and regulations," "low feeling of accomplishment," "problems with the administration" and "limited responsibility" in that order were also identified with less frequency as contributing to their decisions to move on.

SUMMARY

Table 48 is a summary of the significant findings with regard to the level of overall job satisfaction and satisfaction with the factors among various groups of educators in Rehabilitation Medicine in Canadian universities. The findings are discussed in Chapter VIII followed by conclusions and implications.

Table 47

Job Characteristics Contributing to Decision to Move

Job Characteristics	Number of Times Ranked					Number of Times Cited	Weighted Response	Rank Order
	First	Second	Third	Fourth	Fifth			
1. Salary too low	-	2	3	-	3	8	20	12
2. Responsibility limited	3	3	2	1	3	12	38	8
3. Further salary prospect poor	-	3	4	4	1	12	33	9
4. Advancement prospect in rank poor	-	-	4	4	2	10	22	11
5. Research opportunities poor	5	7	3	3	6	24	74	2
6. Recognition inadequate	2	5	1	6	1	15	46	4
7. Problem with administration	4	2	2	2	1	11	39	7
8. Policies and regulations poor	2	5	1	2	4	14	41	5
9. Teaching load excessive	-	1	5	2	2	10	25	10
10. Peer inter-personal relations poor	-	-	1	2	1	4	8	14
11. Relationship with students poor	-	-	-	-	-	0	0	15
12. Low feeling of accomplishment	2	4	3	1	3	13	40	6
13. Feeling of insecurity on the job	-	1	-	2	1	4	9	13
14. New position more attractive	25	2	4	3	3	37	154	1
15. Opportunity for further professional education poor	3	5	3	4	2	17	54	3
Total*	46	40	36	36	33	191		

* The N here is varied since not all mobile respondents selected and ranked five items as instructed.

Table 48

Summary of Significant Findings in Respect of Overall Satisfaction and Factor Satisfaction

Factor	DEMOGRAPHIC CHARACTERISTICS										
	PERSONAL			ORGANIZATIONAL				PROFESSIONAL			
	Sex	Age	Education	Academic Rank	Salary	Primary Involvement	Years in Present Employment	Yrs. of Teaching Experience	Number of Publications	Number of Presentations	Mobility
Overall			*		***		*				
1. Working Conditions			*				*				
2. Content of Work									*		
3. Administrative Involvement											
4. Benefits				***	***	*	**	**			
5. Environmental Support							*	**			
6. Work Ethos	*							*			
7. Teaching Autonomy											
8. Accomplishment											
9. Altruism		*			**			*			

Key: * Significant difference found between means (≤ 0.05)
** Significant difference found between means (≤ 0.01)
*** Highly significant difference found between means (≤ 0.005)

CHAPTER VIII

SUMMARY, CONCLUSIONS AND IMPLICATIONS

This final chapter contains an overview of the study, the findings and a brief discussion of the findings relative to the literature reviewed. Some conclusions are drawn based on the findings. Consideration of the implications for administration and for further research is provided.

OVERVIEW OF THE STUDY

The Problem

The purpose of this study was to investigate the job attitudes relative to job satisfaction and job dissatisfaction of educators in Rehabilitation Medicine in Canadian universities. Specifically the intent was to discover which job facets and job related factors contributed to job satisfaction and job dissatisfaction as well as their relative importance to overall job satisfaction. Furthermore the study was intended to explore the applicability of existing theories of job satisfaction to this group of educators in Canadian universities.

A review of the literature pertaining to job satisfaction revealed that most of the existing theory focused on employees in business and industrial settings. Some studies had been done in educational institutions but in these the major target groups were

employees affiliated to primary and secondary schools. Little attention had been paid to the job attitudes of employees in post secondary institutions. In any case the factors reported by employees in different fields as contributors to their job satisfaction varied widely. Accordingly, some of those factors were used as the starting points in the investigation of the job attitudes relative to job satisfaction of educators in Physical and Occupational Therapy programs in eleven Canadian universities.

Instrumentation

In the conceptual framework for the study overall job satisfaction was conceptualized as a multifaceted entity. To measure that entity a questionnaire containing a large number of the job facets reflective of the job of educators in Rehabilitation Medicine was developed. The questionnaire had three parts.

Section I of the questionnaire elicited demographic data: sex, age, level of education, academic rank, salary, area of primary commitment, employment time, total years in present employment, total years of teaching experience, number of publications, number of presentations and mobility characteristics.

Section II of the questionnaire was dsigned to elicit attitudinal reactions regarding 31 job facets which were judged to characterize the work of educators in Rehabilitation Medicine. The intent was to measure both the importance and the satisfaction associated with each facet and, in addition, to provide a measure of overall job satisfaction.

Section III of the questionnaire consisted of open-ended

questions which requested the respondents to narrate two critical incidents that had contributed most to feelings of exceptional satisfaction with their jobs as educators and two critical incidents that had contributed to feelings of exceptional dissatisfaction with their jobs.

Methodology

The questionnaire was pilot tested on a group of educators in Rehabilitation Medicine in The University of Alberta. Following the pilot test, appropriate revisions were carried out on the questionnaire before it was mailed to the subjects.

The subjects of this study included 118 full time faculty members for the 1979/80 academic year in Physical and Occupational Therapy programs in eleven universities who were registered therapists. Their names were obtained from the heads of the programs. The subjects were mailed the questionnaire with a cover letter and a return paid envelope in a packet directed to their campus addresses.

Altogether, 106 returns were received after a second follow-up request, representing an 89.83 percent return. Twelve of the returned questionnaires were unusable. Therefore, 79.66 percent of the educators who were contacted actually formed the sample for this study.

Data Analysis

For ease of analysis, the data from the questionnaires were key-punched onto IBM computer cards. The Statistical Package for the Social Sciences program was used for processing the data. Appropriate

statistical measures were employed in order to determine the level of satisfaction and to determine the differences in job satisfaction scores among the respondents based on their demographic data. The major statistical procedures employed included frequency and percentage of reponses on each variable, mean scores, standard deviations, analysis of variance, chi-square and probability tests. Where F-values were significant at the .05 level, the Scheffé multiple comparison of means was used to identify the groups which were significantly different.

Review of Findings

In this study the research problems were framed in the form of research questions. The findings are summarized below under each of the research questions investigated in this study.

PROBLEM 1: OVERALL JOB SATISFACTION

Sub-problem 1.1

"To what extent do educators in Rehabilitation Medicine in Canada currently experience overall job satisfaction?"

The mean overall job satisfaction score indicated that in general, the educators included in this study reported moderate overall satisfaction with their jobs.

Sub-problem 1.2

"What job facets were identified as contributing significantly to the feeling of overall job satisfaction?"

Seven job facets accounted for most of the variation in the

feeling of overall job satisfaction. Together they accounted for 90.1 percent of the total variance. "Opportunity to use your knowledge and skill," alone accounted for 45 percent of the total variance.

Sub-problem 1.3

"What job facets were identified as most important to the feeling of overall job satisfaction?"

Nine job facets on the questionnaire had a mean rating of at least 4.5 on the scale where 4 is "very important" and 5 is "extremely important." These facets were deemed most important for the respondents' feeling of overall job satisfaction.

Sub-problem 1.4

"What is the relationship between overall job satisfaction and the importance of the job facets?"

The correlation between the importance rating of each job facet and the index of overall job satisfaction was low. The correlation between each unweighted job facet satisfaction and the index of overall job satisfaction was high. The correlation between the overall job satisfaction index and each of the 31 importance-weighted job facet satisfactions was not appreciably different from the correlation between the overall job satisfaction index and each of the 31 unweighted job facet satisfactions.

This means that the importance measure did not add a significant dimension to the measurement of overall job satisfaction. This was further confirmed by the findings in sub-problem 1.5.

Sub-problem 1.5

"What is the relationship between job facet importance and

job facet satisfaction for this group of educators?"

A positive rank order correlation coefficient of .55 which was significant at .001 level was obtained between the importance and satisfaction ratings of the job facets. A positive relationship existed between the importance the respondents attached to the given facets and the satisfaction they reported on the same facets.

Sub-problem 1.6

"Are the satisfying and dissatisfying facets consistent with the motivator-hygiene theory of job satisfaction described by Herzberg et al (1959)?"

There was a significant difference in the mean level of satisfaction reported by the respondents when on the job facets judged to be hygiene factors were compared to the facets judged to be motivators. The mean satisfaction score on all motivators together was significantly higher than the mean satisfaction score on all hygiene factors together. The mean importance of the motivators was also significantly higher than that of hygienes.

Further examination of the responses showed that six out of the seven job facets on which at least 90 percent of the respondents were satisfied were judged to be related to the intrinsic aspects of the job otherwise classified as motivators. On the other hand, all but two of the nine job facets on which at least 20 percent of the respondents were dissatisfied were judged to describe primarily the extrinsic aspects of the job classified as hygiene factors.

Three of the seven job facets which accounted for 90.1 percent

of the total variance in overall job satisfaction were judged to be primarily related to the intrinsic aspects of the job and accounted for 50 percent of the total variance; while 4 were judged to relate to extrinsic components of the job. Finally, nine job facets were identified as most important to the feeling of overall job satisfaction; eight of them were deemed related to the intrinsic aspects of the job while one related to extrinsic aspects.

PROBLEM 2: JOB ASPECT SATISFACTION AND DISSATISFACTION

Sub-problem 2.1

"What critical incidents were identified by educators in Rehabilitation Medicine in Canadian universities as the sources of satisfaction and dissatisfaction?"

Three job aspects were mentioned with the highest frequency in the critical incidents which were identified as the sources of the feeling of job satisfaction. Those were "recognition," "achievement" and "content of work." "Recognition" and "achievement" together were mentioned most often and appeared in 69.5 percent of the satisfying critical incidents.

On the other hand, the three job aspects which were mentioned most frequently in the critical incidents associated with a feeling of exceptional dissatisfaction were: "context of work," "policies and administration" and "interpersonal relationship with peers." Together they appeared in 54.2 percent of the dissatisfying critical incidents. A number of other job aspects were mentioned with less frequency.

Sub-problem 2.2

"Is there any consistency between these incidents and the motivator-hygiene dichotomy of Herzberg et al. (1959)?"

Four job aspects (which by Herzberg's classification scheme are motivators) were associated more with job satisfaction than with job dissatisfaction. They were "recognition," "achievement" "content of work" and "advancement." One motivator item namely inadequate "responsibility" was identified more as a source of job dissatisfaction than job satisfaction.

On the other hand five job aspects (classified by Herzberg's scheme as hygiene factors) were associated more with job dissatisfaction than with job satisfaction. They were "work context," "policies and administration," "interpersonal relationship with peers," "constraint on personal life," and "reward system." However, one job aspect, "interpersonal relationship with students," was identified substantially more as a source of job satisfaction than job dissatisfaction among this group of educators.

In summary, job aspects classified as motivators were mentioned proportionately more often as sources of satisfaction than as sources of dissatisfaction. Job aspects classified as hygienes were mentioned proportionately more often as sources of dissatisfaction than as sources of satisfaction.

When all job aspects classified as motivators were considered they were identified proportionately more often than hygienes in describing satisfying incidents; hygiene aspects were identified proportionately more often than motivators in describing the dissatis-

fying incidents.

PROBLEM 3: OVERALL JOB SATISFACTION AND DEMOGRAPHIC VARIABLES

The difference in job satisfaction among educators in Rehabilitation Medicine in Canada was investigated using demographic data as the independent variables. The primary analysis was done using the index of overall job satisfaction as the dependent variable. The secondary analysis was carried out on job facet factors. The investigations were grouped under three sub-problems.

Sub-problem 3.1: Job Satisfaction and Personal Variables.

"To what extent are there differences in overall job satisfaction between subgroups of respondents formed on the basis of their personal variables; sex, age, academic level?"

Sex. Female respondents were significantly less satisfied than their male counterparts on the factor of Work Ethos. No other significant differences were obtained.

Age. Although older educators tended to express higher job satisfaction than the younger educators no statistically significant differences existed among the age groups on their mean level of overall job satisfaction. However, the younger age group (40 years) were significantly less satisfied than the group 40-49 years, with the extent to which their job provided them the opportunity to be Altruistic.

Level of education. The respondents who had teaching certificates expressed significantly higher mean overall job satisfaction

than the respondents who had only the baccalaureate in Physical and/or Occupational Therapy. It was also found that those educators who had teaching certificates and those who had graduate degrees were significantly more satisfied with their Working Conditions than their peers who had only the baccalaureate.

Sub-problem 3.2: Job Satisfaction and Organizational Variables

"To what extent are there differences in overall job satisfaction between subgroups of respondents formed on the bases of their organizational variables?"

Academic rank. The level of overall job satisfaction was highest for the group of educators who were Associate Professors or Professors while the level of overall job satisfaction of the Assistant Professor group was the lowest. Those below Assistant Professor scored between these two groups. However, the observed differences among the three groups was not statistically significant.

Associate Professors and Professors were significantly more satisfied with the Benefits they got on their job than the groups below Associate Professor rank.

Salary. The level of overall job satisfaction was highest for the group of educators who were paid the highest salaries. Educators whose salaries were over $33,000 had significantly higher overall job satisfaction than the two groups who earned $21,000 or less, and $21,001-$27,000 respectively.

With regard to Benefits, educators with salaries above $33,000 were significantly more satisfied than those whose salaries

were below $27,000.

On the factor of Altruism, educators on a salary $21,000 or less were significantly less satisfied with the altruistic content of their work than educators on a salary above $33,000.

Primary involvement. No significant differences in the level of overall job satisfaction was observed among these educators grouped according to the area of their primary commitment of more than 60 percent of their time on the job. However, the predominantly "administration" group were significantly more satisfied than the "mixed" group with the Benefits they receive on their job.

Years in present employment. The overall job satisfaction mean score of educators in Rehabilitation Medicine was highest for the group who had stayed the highest number of years in their present employment. The respondents who were 3-5 years in current employment reported significantly less overall job satisfaction than the respondents who had spent 10 years and over in that employment.

Educators who were in their first or second year in their current employment were significantly more satisfied with regard to Working Conditions than educators who had spent 3-5 years in their current employment.

On the Benefits factor, educators with 3-5 years in their present employment were significantly less satisfied with the Benefits they receive on their job than educators who had been on their current employment for 10 or more years. Similarly the educators with 3-5 years in their present employment were significantly less satisfied with the Developmental Support provided to them on the job than

educators who had 10 or more years in their current employment.

Sub-problem 3.3: Job Satisfaction and Professional Variables

"To what extent are there differences in overall job satisfaction among subgroups of respondents formed on the bases of their professional variables: total years of experience, number of publications and number of presentations?"

Total years of teaching experience. There was no statistically significant difference in the level of overall job satisfaction among groups of educators based on their total number of years of experience even though the educators with the highest total years of teaching experience tended to express the highest overall job satisfaction.

The educators with 1-2 years of teaching experience were significantly less satisfied with the Benefits they derive from their job than educators with 10 or more years of teaching experience. The Environmental Support factor provided a significantly lower level of satisfaction for educators with 3-5 years of teaching experience than for educators with more than five years of teaching experience. No differences were present on the Environmental Support factor between educators who had 1-2 years of teaching experience and other groups with more teaching experience.

On Work Ethos, however, the educators with 1-2 years of teaching experience were less satisfied than educators who had 10 or more years of teaching experience. No significant difference existed between these two groups and the groups of educators whose teaching experience ranged from three to nine years.

on their current job.

Mobile educators cited reasons for their decision to move as "opportunities for research," "opportunities for further professional education" and "adequate recognition."

DISCUSSION OF FINDINGS

Problem 1: Overall Job Satisfaction and Job Facet Importance and Satisfaction

Despite the fact that the subjects were moderately satisfied with their jobs as a whole, their levels of satisfaction showed wide variations on the 31 job facets. For example, there were seven job facets on which over 90 percent of the respondents were satisfied, but there were nine job facets on which more than 20 percent of the respondents were dissatisfied.

In many ways the use of a forced choice instrument produced results similar to those studies which utilized interview methodology. An examination of the data provided by the subjects in this study revealed that seven job facets accounted for 90.1 percent of the variance in overall job satisfaction. Three of those job facets accounted for 50 percent of the total variance, and were primarily related to the intrinsic aspects of the job. Furthermore, six out of the seven job facets on which over 90 percent of respondents were satisfied related primarily to the intrinsic aspects of the job. When the subjects identified nine job facets which they considered most important to their feeling of overall job satisfaction, eight of the nine were related to the intrinsic aspects of the job. These

The opportunity to be Altruistic on the job provided significantly greater satisfaction for educators who had 10 or more years of teaching experience than for those who had 3-5 years of teaching experience.

Number of publications. The group of educators who had the highest number of publications reported the highest overall job satisfaction. However, the observed difference in the level of overall job satisfaction among the respondents based on their publishing records was not statistically significant.

The Content of Work factor provided a significantly greater level of satisfaction for educators who had three or more publications than for educators who had one or two publications. No difference existed however, between non-publishers and publishers on this factor.

Number of presentations. No significant differences on the level of overall job satisfaction or on the job facet factors were found between the respondents when categorized by their reported number of presentations over the last five years.

PROBLEM 4: JOB SATISFACTION AND MOBILITY

"What is the difference in the level of overall job satisfaction between mobile and non-mobile educators in Rehabilitation Medicine in Canadian universities?"

There was no significant difference in the level of overall mean job satisfaction between the mobile educators and the non-mobile educators in this study. The mobiles, however, reported significantly greater satisfaction with the recognition accorded to them by others

findings support the results of Graen and Hulin (1968) that intrinsic variables are related more strongly to overall job satisfaction than are extrinsic variables.

On the other hand seven of the nine job facets on which at least 20 percent of the subjects were dissatisfied were extrinsic to the job itself. The findings here lead to the conclusion that for that proportion of educators in Rehabilitation Medicine extrinsic characteristics were related more strongly to overall job dissatisfaction than intrinsic job characteristics.

Conceptually it was expected in the methodology utilized, that the use of an importance measure in conjunction with satisfaction measures would provide both theoretically and empirically more appealing measures and better estimates of overall job satisfaction than satisfaction measures used alone. The results of both Pearson product moment correlation and Spearman rank order correlational analyses provided no support for this position. The findings of Youngberg et al. (1962) and Glennon et al. (1960) that the use of importance and satisfaction measures together produced better results than satisfaction measures used alone were not supported by the results of this study. The results also do not support those of Wanous and Lawler (1972) who found a significant correlation between facet importance and the correlation of facet satisfaction with overall job satisfaction. The results obtained in this study support Ewen's (1967) conclusion that importance measures add little to the measurement of overall job satisfaction.

The results here suggest that perhaps the subjects did

consider the importance of the job facets to their overall job satisfaction before they reported the level of their satisfaction with each job facet. In such a case, multiplying satisfaction by importance was redundant and as such added little to the measurement of overall job satisfaction. These results lend support to the findings of Locke (1969) and Mobley and Locke (1970) that importance ratings are already reflected in the satisfaction ratings, and therefore, the weighting procedure added nothing significant to the prediction of overall job satisfaction.

On the other hand since the job facet, a priori, had been judged as important before being included in the questionnaire, perhaps, the items themselves did not show sufficient variability in importance to affect the results obtained by a simple unweighted satisfaction measure. The other point is that the scale range employed in this study might not have provided sufficient variability.

Finally when the job facets on the questionnaire were grouped into intrinsic facets (motivators) and extrinsic facets (hygienes) the intrinsics together produced not only a higher mean satisfaction score than the extrinsics, but also a significantly higher mean importance score. These results are in accord with those of other studies by Bisconti and Solmon, (1977) Locke, (1973) and Armstrong (1971) who reported that by far the strongest determinants of job satisfaction are the characteristics intrinsic to the job itself. From these results one might infer that the subjects in this study, to a large extent, had satisfied much of their lower-order needs so that they were essentially motivated more by the intrinsic aspects of their job

which are associated with the satisfaction of higher-order needs (Slocum 1971:312) than the extrinsic aspects of the job which are hygienes and are associated with the satisfaction of the lower order needs. They placed more importance on the facets of the job that provided them with the opportunity for the satisfaction of their self-actualization needs. However, they showed greatest dissatisfaction with the extrinsic facets, thus suggesting that some of these lower-order needs are not being met.

Problem 2: Job Aspect Satisfaction and Dissatisfaction

The findings showed that when satisfied, educators in Rehabilitation Medicine in Canada reported incidents which were characterized by adequate recognition, opportunity for achievement and advancement, interesting and stimulating work and good interpersonal relationships with students. Such responses referred primarily to the content or intrinsic aspects of the job which Herzberg called motivators.

On the other hand when dissatisfied, the subjects reported critical incidents which were characterized by excessive work load, institutional policies and administration, inadequate responsibility, working conditions, relationship with peers, the reward system and pressures on personal life. These responses, except "responsibility," referred primarily to the context in which their job was done (i.e. extrinsic aspects of the job) which Herzberg labelled as hygienes.

Herzberg's motivator-hygiene theory of work attitudes suggests that one set of attitudinal variables (motivators) leads to high job satisfaction but does not contribute appreciably to dissatisfaction,

while the other set of attitudinal variables (hygienes) leads to job dissatisfaction but does not contribute appreciably to satisfaction. The results of this study only partially supported Herzberg's two factor theory of job satisfaction insofar as the factors which produced satisfaction were different from rather than opposite of those which produced job dissatisfaction.

The motivator and hygiene variables both contribute to job satisfaction and dissatisfaction. For example, the inadequacy of one motivator variable, "responsibility," contributed more to dissatisfaction than to satisfaction, one hygiene factor - "interpersonal relationship with students" - contributed more to satisfaction than to dissatisfaction. This professional group regarded "inter-personal relationship with subordinates (students)," more as a source of satisfaction than dissatisfaction. Most of the studies that have reported the opposite finding were carried out in business and industry. Interaction with students constitutes the focal process of teaching and perhaps should be viewed quite differently from the superior-subordinate interaction in the business and industrial sector. Hence, Cohen (1974:373) maintains that "interaction with students should be the chief intrinsic motivator" in teaching. The consistent finding from this study was that altogether motivators were more strongly related to job satisfaction than to job dissatisfaction; while altogether hygienes were more strongly related to job dissatisfaction than to job satisfaction.

Contrary to Herzberg's two factor theory which ignores the interaction effect, it is reasonable to believe that the determinants

of job satisfaction do interact rather than stay isolated along separate dimensions. The proponents of this line of conceptualization include Friedlander (1963), and Wernimont (1966) and Dunnette et al. (1967) who found that motivator and hygiene variables were not in fact mutually exclusive determinants of employee's job satisfaction and dissatisfaction respectively.

Interestingly enough in this study, the critical incident approach provided more credibility for the Herzberg two-factor theory than the forced choice, structured item approach used on the questionnaire instrument. This observation lends support to the criticism of the two-factor theory by Brayfield (1960) and Dunnette et al. (1967) that the results are method-bound and are supported by the studies which had used the original methodology. The respondents' expressed satisfaction with the facets provided a more direct measure of the intensity of satisfaction than Herzberg's methodology of inferring the intensity of satisfaction/dissatisfaction from frequency counts. The results of this study suggest that the intensity of satisfaction arising from intrinsic aspects of the job (motivators) is greater than that arising from the extrinsic (hygiene) aspects of the job. This, however, does not imply that intrinsic job aspects are exclusively the sources of job satisfaction.

PERSONAL CHARACTERISTICS

Problem 3: Job Satisfaction and the Demographic Variables

Sex. The absence of sex differences in the level of overall

job satisfaction among this group of professionals corroborates findings by Manthe (1976) Sauser and York (1978) and Weaver (1978). This absence of a difference may be explained if the sexes are equally affected by the determinants of job satisfaction; that is, their conditions of employment are comparable. No discrepancy then exists between the objective conditions of their employment and their subjective evaluations of their job attitudes relative to job satisfaction.

Age. On the whole overall job satisfaction tended to increase with an increase in the age of the respondents. This finding is in agreement with the results of many studies which have reported a positive linear relationship between age and job satisfaction, such as Chen (1977) and Hunt and Saul (1975), and quite unlike others that have found a U-shaped relationship between age and job satisfaction (Herzberg et al. 1957). However, in this study, no significant difference existed among the age groups on the level of overall job satisfaction.

Educational level. Most studies which have found that educational level influences the worker's level of satisfaction have explained such differences as reflecting differences in expectations. The difference between the 'teaching certificate' group and the baccalaureate group could be attributed to perceptual differences between them arising from the former's academic preparation to teach. Perhaps the differences in level of education created marked differences in the expectations of the subjects.

ORGANIZATIONAL CHARACTERISTICS

Academic Rank

The results of this study provide a partial support to the findings reported by Porter (1961, 1962, 1963), Vroom (1964), Waters and Waters (1969), and Wild (1970) that the higher a worker is in the occupational hierarchy, the higher is the individual's job satisfaction. In this study the Professors and Associate Professors reported the highest overall job satisfaction.

This result was not surprising since according to Tannenbaum et al. (1974), higher job levels (academic ranks) frequently offer more pay, more power, more autonomy, higher social status, greater responsibility, greater discretion and more task variety and complexity.

The observed difference between the Assistant Professors and the educators below the Assistant Professors was in the reverse direction to those reported by Waters and Waters (1969) and Wild (1970). The reason for this opposite finding is not clear. A closer consideration of Korman's (1977:224) points may provide some clues. Korman notes that pay and promotional opportunities are tied up with occupational levels and also have social prestige themselves. Perhaps the fact that promotion from lower academic ranks to assistant professor rank is easier than promotion to higher ranks from assistant professor rank, may explain this finding. Perhaps the intense struggle for promotion by Assistant Professors may produce moments of lack of self-fulfillment thereby giving rise to a lowered feeling of overall job satisfaction.

Salary

The highest levels of overall job satisfaction were reported

by educators who were in the over $33,000 salary range. This finding compliments similar findings by Bembry (1975) and Chen (1977) who found a significant positive correlation between job satisfaction and salary level among teachers. The finding is also consistent with Lawler's (1971) evidence that the pay an individual receives is of major importance in satisfying various individual needs. The response obtained on the salary facet item suggests that when asked about their salary, the respondents provided a "socially acceptable response." Of the 31 job facets on the questionnaire, salary had the lowest correlation with overall job satisfaction, and did not even load on any of the nine factors. The nature of the work and the intellectual stimulation offered by the work were identified as the rewards most sought after by the subjects.

Primary Involvement

The absence of a significant difference in the overall job satisfaction among educators based on their primary area of involvement could be attributed to identical professional development. The administrators of most programs assume their positions by virtue of longevity rather than by specialization. Since all the subjects' particular academic area of primary involvement is a result of personal choice, no significant differences in overall job satisfaction based on their primary area of involvement should have been expected.

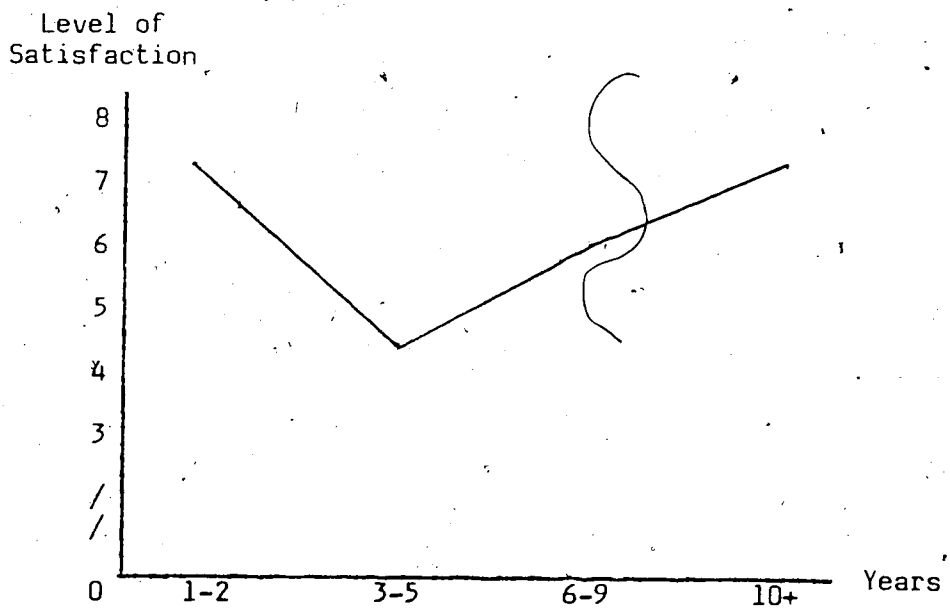
Years in Present Employment

Although educators who had 10 years and over in the current employment had significantly higher overall job satisfaction than the

3 - 5 year group, the observed differences among the groups tended to demonstrate a curvilinear relationship. A U-shaped relationship was proposed by Herzberg et al. (1957) similar to the one obtained in this study (see Figure 1).

Figure 1

Relationship Between Years in Present Employment and Overall Job Satisfaction



From Figure 1, it appears that when the educators started their jobs, their overall job satisfaction was high. That level of job satisfaction subsequently declined with tenure up to a point somewhere between the third and fifth year, and then began to rise again. Once that rise had occurred it seemed to continue for the rest of their tenure in employment. The period of decline corresponds to a period which Lofquist and Dawis (1969) maintain is marked by an increasing

need to adapt to the particular work environment. The second rising trend in overall job satisfaction corresponds to the time March and Simon (1958) referred to as a period of the subjects' perceived decrease in the availability of job alternatives as they become older and have longer tenure in position. Hunt and Saul (1975:691) maintain that:

> With increasing tenure, employees adjust their expectations in the direction of the real opportunities and returns from the job. Hence, there is an ever-decreasing gap between the employees' expectations and actual environmental returns which results in increasing levels of job satisfaction.

JOB SATISFACTION AND PROFESSIONAL VARIABLES

Total Years of Teaching Experience

Although the difference in overall job satisfaction among groups of Rehabilitation Medicine educators based on their total years of teaching experience was not statistically significant the level of job satisfaction was highest for those educators who had the highest number of years of experience. The group of educators with 1 - 2 years of teaching experience differed significantly from the educators with 10 or more years of experience on the Benefits factor. This finding is in agreement with Miskel's (1973) report that younger educators tended to regard as important such factors as pay, benefits, physical working conditions and opportunity to be innovative.

The significant difference in the factor of Altruism between educators who had ten or more years and those who had 3 - 5 years of teaching experience might be attributed to perceptual differences between the groups relative to this factor in work situations. With

increasing years of experience professional people may tend to experience a greater element of Altruism in their professional job than individuals at the beginning of their professional careers.

Publications and Presentations

Two scholarship characteristics were employed as measures of productivity among this group of professionals, namely the number of publications and the number of presentations at professional meetings. No significant difference was found among groups of educators in Rehabilitation Medicine based on the number of publications or the number of papers read at professional meetings. Brayfield and Crockett (1955) had suggested that high productivity and job satisfaction could be expected to occur together only when productivity was perceived as a means to important goals and when those goals were achieved. Perhaps the use of research and publications in determining salary increases and promotions have not received the same emphasis in all the programs with respect to this group of professionals. If this is true it may provide the explanation for the absence of a significant difference in overall job satisfaction between this group of professionals based on the two indicators of productivity. It would also explain why it was rated "not applicable" by 16 percent of the respondents while 32 percent were dissatisfied.

Interestingly enough the group of educators who had no publications had higher overall mean job satisfaction scores than the group with one or two publications. The same results also held true for the same two groups with regard to scientific presentations. The reasons for these observations are difficult to infer from the data obtained

in the present study. They are, however, in agreement with the suggestion by Bass (1965), that a productive worker may manifest more dissatisfaction with certain conflicting aspects of his work as a consequence of his involvement and interest in the work.

Problem 4: Job Satisfaction and Mobility Characteristics

No significant difference in overall job satisfaction existed between the mobile and non-mobile groups of educators in Rehabilitation Medicine. It seems that March and Simon's (1958) conclusion that satisfied employees are more likely to be committed to the job, and so less likely to change employers, has no applicability to this group of professionals. The reasons given for moving suggest that mobility was a function of "the attraction of the new position" rather than a consequence of job dissatisfaction. This could also explain why the mobile educators expressed greater satisfaction with the recognition accorded to their work by others than did the non-mobiles.

CONCLUSIONS

Based upon the data examined in this study and the results obtained, the following conclusions were drawn:

1) Overall Satisfaction--Educators in Rehabilitation Medicine in Canadian universities are moderately satisfied with their jobs.

2) The job facets with which the highest percentage of educators in Rehabilitation Medicine in Canada were satisfied include "the freedom to select the subject matter of courses taught," "relationship with students," "opportunity to use own initiative," "opportunity to

use own knowledge and skill," "opportunity for professional growth" and "the particular course assigned to teach." The highest percentage of educators expressed dissatisfaction with "the use of research and publications in determining salary increments," "physical conditions of classrooms and labs," "opportunity to do research," "status accorded to educators in the profession within the university," "methods of determining faculty promotion and tenure," "number of non-teaching duties," and "policies regulating sabbatical leave."

3) The importance of the job facets was reflected in the level of satisfaction expressed with regard to those facets. The importance measure did not provide useful additional information on the respondents' overall job satisfaction.

4) Both the job facets categorized as motivators and the job facets categorized as hygienes were capable of producing job satisfaction and dissatisfaction. The motivators, however, were not only more important for satisfaction with the job but they also contributed most to the overall job satisfaction of educators in Rehabilitation Medicine.

5) Job Aspect Satisfaction--Using the critical incident approach to the measurement of job satisfaction, the job satisfaction and dissatisfaction of educators in Rehabilitation Medicine in Canada were similar to those of other professional groups as specified by Herzberg and his associates. Contrary to Herzberg's categorization, however, inadequate "responsibility" contributed more to job dissatisfaction than job satisfaction while "interpersonal relationship with students" (subordinates) contributed more to job satisfaction than to job dissatisfaction.

Overall Job Satisfaction and Demographic Characteristics

Sex. Male and female educators experienced no differences in their overall job satisfaction. Nevertheless, female respondents were less satisfied than the males on Work Ethos.

Age. The level of overall satisfaction tended to increase as age increased, the relationship was curvilinear. Respondents under 40 years of age were less satisfied than the 40 - 49 age group with the extent to which their job provided them the opportunity to be Altruistic.

Education. Educators with teaching certificates were more satisfied with their job as a whole than educators who had the baccalaureate. Educators who had graduate degrees and/or teaching diplomas expressed more satisfaction with regard to their Working Conditions than the educators who had only professional undergraduate qualifications.

Academic rank. Associate Professors and Professors expressed more job satisfaction than did the educators in the lower academic ranks. The relationship between overall job satisfaction and academic rank, however, was curvilinear for these respondents.

Salary. The group of educators whose salary was $27,000 or less had significantly less overall job satisfaction than those educators whose salary was over $33,000.

Primary involvement. The area of primary involvement produced no significant difference in the level of overall job satisfaction among educators in Rehabilitation Medicine in Canada.

Years in present employment. A U-shaped curvilinear relationship between the number of years in the present employment and the level

of overall job satisfaction existed among educators in Rehabilitation Medicine in Canada. On the whole, those educators who had 3 - 5 years in their current employment reported the lowest overall job satisfaction. Also, educators who had 3 - 5 years in their present employment had the lowest level of satisfaction with regard to the Working Conditions, Benefits, and the Environmental Support, provided by their jobs.

Total years of teaching experience. The educators who had the highest total years of teaching experience tended to express more overall job satisfaction. The educators with 3 - 5 years of teaching experience reported the lowest overall job satisfaction. Educators who had 3 - 5 years of teaching experience were less satisfied with such factors as Benefits, Environmental Support, and Altruism.

Number of publications and/or presentations. These two variables were not related to the job attitudes relative to the level of overall job satisfaction of educators in Rehabilitation Medicine in Canada.

Mobility. No significant difference existed in the level of overall job satisfaction between the mobiles in this study and the non-mobiles. The job characteristics which contributed most to the decisions of the mobiles to change employers were, in descending order of importance, "opportunity for research," "opportunity for further professional education," and "adequate recognition." The mobiles reported significantly greater satisfaction than the non-mobiles on the recognition accorded to their work by others on their current job.

IMPLICATIONS

Implications for Administration

In the light of the findings of this study there was a disparity in the level of overall job satisfaction during the period of 3 - 5 years of employment, and among the educators in Assistant Professor rank. These findings warrant a close attention by administrators with a view to providing employees with the opportunity to perform meaningful and responsible work in environments conducive to increasing their level of overall job satisfaction.

Some of the sources of dissatisfaction identified in this study such as "excessive work load," "policies and administration," "interpersonal relationship with peers," "low responsibility" and the "reward system" require the understanding of administrators who should undertake to eliminate or at least reduce the effects of such causes. Several respondents indicated low job satisfaction levels regarding the existence of "dead wood" among their professional colleagues who have been kept off the job market because tenure had made mobility voluntary rather than compulsory. Intra-professional mobility is further limited in Rehabilitation Medicine as in other higher education programs in Canada due to the declining job market and the increased number of job seekers who have graduate degrees resulting in "greater competition among professors for institutional rewards" (Showalter, 1978) and status recognitions. Such being the case, administrators must find ways of dealing with and motivating educators who are otherwise considered as "growing-stale" and unproductive in order to "retool" them and mitigate the adverse affective effects such people have on their

colleagues.

"Interpersonal relationships with administration(s)" was indicated by several respondents as contributing to their feeling of exceptional dissatisfaction with their job. Administrators should endeavour to realize that they have effects on the feelings which their professional colleagues working under them experience in the course of their employment. A clear feedback mechanism between the employees and the administrators should be established in order to ascertain such effects on one another. Above all adequate responsibility should be delegated to the faculty members.

The findings of this study suggest that the greatest sources of satisfaction on the job for this professional group are essentially factors intrinsic to the job while dissatisfaction is related mostly to factors extrinsic to the job. Administrative attempts to influence faculty behaviour such as performance evaluations and work load measurements, can only achieve success if there is an adequate understanding and consideration of the aspirations and priority needs of the faculty and what leads to their satisfaction with their work. For example, the faculty-student interaction was a major source of satisfaction for most people in this study. Satisfaction can be enhanced by the elimination of what may be regarded as obstacles to the intensity of such interaction such as excessive committee involvement, too heavy a teaching load, and inordinate emphasis on research and publications.

The major areas of dissatisfaction for many educators in Rehabilitation Medicine include: the lack of adequate resources for their departments resulting from the "shrinking budgets," unnecessary

meddling with the affairs of the department by people external to the profession, poor inter-personal relationship with peers, and institutional red tape. These warrant intra-departmental and intra-institutional studies by task forces set up by administrators in the respective universities.

The absence of scholarly productivity by way of publications and presentations at scientific meetings may be attributable to the excessive work load and the inadequate resources which the subjects emphasized in the critical incidents reported in this study. Perhaps this suggests that administrators need to establish more realistic expectations in this area in the light of the available resources and the prevalent work load.

Implications to the Faculty Members in Rehabilitation Medicine

In this study it has been shown that such demographic variables as education, academic rank, salary scale and tenure do affect the level of overall job satisfaction of educators in Rehabilitation Medicine. An awareness that satisfaction tends to increase with these variables should provide the impetus for greater commitment to one's employment, reduce dissatisfaction and the consequent tendency to change employment. There is a limit to the extent of mobility that is tolerable without raising serious doubts in employers' minds regarding the person's stability. While some may move a few times before settling down with one employer to live out their careers, some never do settle down. Lack of commitment to one's employment may be at the root of some reported mobility.

The results of this study also indicate that educators in Associate Professor and Professor ranks were more satisfied with their jobs than were other educators. Therefore, educators should bear in mind that in universities where definite signs of "up or out" promotion policies are present, the non-tenured and Assistant Professor positions become the testing grounds for future upward mobility in ranks. Replacements are relatively easier for such positions than at higher academic ranks. Therefore, educators in Rehabilitation Medicine must endeavour to prepare themselves to measure up to the expectations of the larger academic community in which they have elected to make their careers irrespective of the peculiarities of their profession.

Implications for Further Research

This study excluded educators in Rehabilitation Medicine who did not belong to Physical and Occupational Therapy professions and educators in Rehabilitation Medicine who were not on full-time employment for the 1979/80 academic year. A similar study might well be conducted to investigate the job satisfaction of the groups excluded from this study compared to the group included.

Further research is necessary to attempt to examine the proportion of the total variability in the sources of overall job satisfaction and dissatisfaction that can be attributed to specific universities or regions in which the educators work. In this study such demographic variables as education, sex and years in present employment were shown to affect the level of overall job satisfaction as well as satisfaction with specific job facets. Further studies are necessary in order to "partial out" the specific relationship between job

satisfaction and each of these variables.

Since the current interest in the differences between men and women academics was not upheld by the results of this study, perhaps future research on such differences might focus not so much on tangible benefits as on the employees' affective orientation such as job satisfaction. Moreover, comparison of sex differences among academics may become more meaningful when such comparisons are limited to occupational categories.

The primary concerns of this study were to examine the job attitudes relative to the level of job satisfaction of educators in Rehabilitation Medicine, to identify the factors which determined their job satisfaction/dissatisfaction and to determine the differences in the job attitudes among the educators based on their demographic characteristics. The effect of a decline in overall job satisfaction on the performance of the educators was not investigated. Future research is necessary to attempt to ascertain the effect of observed decline in the level of job satisfaction on the performance of the incumbents.

The results of this study have shown that the "importance" ratings on job facets may be already reflected in the satisfaction rating, and therefore the multiplicative procedure added nothing significant to the prediction of overall job satisfaction. The onus is on the user of the multiplicative model to prove that it is superior to the simple sum of the job facet satisfactions. In the absence of such a proof, future researchers in this area may well consider using the simple sum of the job facet ratings as a valid and parsimonious measure of overall job satisfaction.

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APPENDIX A

Questionnaire

QUESTIONNAIRE

THE JOB SATISFACTION AND MOBILITY OF EDUCATORS IN REHABILITATION MEDICINE IN CANADA

Col 1-4

— — — 1

Office Use Only

C C

PRELIMINARY QUESTIONS

A. Do you have a clinical preparation background in Occupational Therapy, or Physiotherapy, or combined OT/PT?

1. Yes _____ 2. No _____

B. Are you in full-time employment in your school/department?

1. Yes _____ 2. No _____

If your answer is "No" to either of the above questions, please stop and return this questionnaire in the stamped addressed envelope.

1. To which Department of Rehabilitation Medicine do you provide your maximum employment time?

1. OT _____ 2. PT _____ 3. Equal time for both _____ 5

2. What is your sex? 1. Female _____ 2. Male _____ 6

3. What was your age on January 1, 1979?

1. Under 30 _____
2. 30-39 _____
3. 40-49 _____
4. 50-59 _____
5. 60 and over _____ 7

4. What is your Highest Academic Qualification? (Check one.)

1. Professional Diploma plus Teaching Certificate ..... _____
2. Baccalaureate plus Teaching Certificate ..... _____
3. Some Graduate Credits plus Teaching Certificate ..... _____
4. Master's Degree ..... _____
5. Doctorate ..... _____
6. Other (please specify) ..... _____ 8

5. What is your academic rank?

1. Instructor ..... _____
2. Lecturer ..... _____
3. Assistant Professor ..... _____
4. Associate Professor ..... _____
5. Professor ..... _____
6. Other (please specify) ..... _____ 9

6. What is your annual salary for the 1979-80 academic year?

1. Under $18,000 ..... _____
2. $18,001-$21,000 ..... _____
3. $21,001-$24,000 ..... _____
4. $24,001-$27,000 ..... _____
5. $27,001-$30,000 ..... _____
6. $30,001-$33,000 ..... _____
7. $33,001-$36,000 ..... _____
8. $36,001-$39,000 ..... _____
9. Over $39,000 ..... _____ 10

7. What percentage of your employment time is spent on each of the following areas? (please check (√) in each of the 3 columns.)

	Administration	Teaching	Research and Other University Activities
1. Nil			
2. Under 20%			
3. More than 20% but less than 40%			
4. More than 40% but less than 60%			
5. More than 60% but less than 80%			
6. More than 80% but less than 100%			

11, 12, 13

8. In many schools/departments in Rehabilitation Medicine in Canada have you been employed in a full-time academic position?

1. one ..... _____
2. two ..... _____
3. more than two ..... _____

14

9. If you have moved from a previous position, which of the following best describes the reasons for leaving your previous job. (Check only one most important reason.)

1. My previous job was unacceptable and I had a strong desire to move ..... _____
2. My previous job was no longer available and I had to move ..... _____
3. My previous job was acceptable, but I felt I could do a better job elsewhere ..... _____
4. My job was acceptable but I needed an opportunity for further professional education .. _____
5. Other (please specify) .....
5. ..... _____

15

10. If you have moved from a position in a previous school/department please select the FIVE MOST IMPORTANT factors from the list below and rank order those FIVE to the extent that they contributed to your decision (1=MOST important).

1. _____ Salary was too low.
2. _____ Responsibility was limited.
3. _____ Further salary prospects were poor.
4. _____ Advancement prospects in academic rank poor.
5. _____ Research opportunities were poor. 16, 17
6. _____ Recognition was inadequate. 18, 19
7. _____ Problem with the administration. 20, 21
8. _____ Policies and regulations in the school/department poor. 22, 23
9. _____ Teaching load was excessive. 24, 25
10. _____ Interpersonal relations with peers were poor.
11. _____ Relationship with students was poor.
12. _____ Low feeling of accomplishment.
13. _____ Feeling of insecurity on the job.
14. _____ New position was more attractive.
15. _____ Opportunity for further professional education poor.

11. If you have reached a point at which you would like to move, please select the FIVE MOST IMPORTANT factors from the list below and rank order those FIVE to the extent that they do contribute to your decision (1=MOST important).

1. _____ Salary is too low.
2. _____ Responsibility is limited.
3. _____ Further salary prospects are poor.
4. _____ Advancement prospect in academic rank is poor.
5. _____ Research opportunities are poor. 26, 27
6. _____ Recognition here is inadequate. 28, 29
7. _____ Problem with the administration. 30, 31
8. _____ Policies and regulations in the school/department are poor. 32, 33
9. _____ Teaching load is excessive. 34, 35
10. _____ Interpersonal relations with peers poor.
11. _____ Relationship with students is poor.
12. _____ Low feeling of accomplishment.
13. _____ Feeling of insecurity on the job.
14. _____ A new position would be more attractive.
15. _____ Less opportunity for further professional education.

12. How long do you intend to remain with your present school/department? (please check one only)

1. _____ Until retirement.
2. _____ Until I get a job with an advancement.
3. _____ This year only.
4. _____ Probably two to three years. 36
5. _____ Probably four to ten years.
6. _____ Undecided.

13. How many letters of enquiry have you sent to potential employers since January 1, 1979?

1. None ..... _____
2. 1 ..... _____
3. 2-3 ..... _____ 37
4. 4-5 ..... _____
5. Over 5 ..... _____

14. Including the current academic year, how many years have you spent in your present school/department? ..... _____ 38, 39

15a. For how many years have you occupied a full-time academic position *in Canada*? ..... _____ 40, 41

b. *Altogether* for how many years have you occupied a full-time academic position in PT/OT? ... _____ 42, 43

16a. How many refereed articles have you had published in professional journals (alone or co-authored) in the last five years? (Include current year.) ..... _____ 44, 45

b. How many papers have you presented at professional meetings in the last five years? ..... _____ 46, 47

SECTION II **JOB FACET SATISFACTION**

IMPORTANCE						SATISFACTION							1-4 — — 2
Unimportant (Low)	Slightly important	Moderately important	Very important	Extremely important (High)	Please rate your *current level of satisfaction/dissatisfaction with each* of the following items in relation to your job and also indicate *the importance of each of them to your satisfaction* with your job. Please circle the selected rating for both *Importance* and *Satisfaction* components of each item.	Highly satisfied (High)	Moderately satisfied	Slightly satisfied	Slightly dissatisfied	Moderately dissatisfied	Highly dissatisfied (Low)	Not applicable	
1	2	3	4	5	17. The salary you receive	6	5	4	3	2	1	N/a	5, 6
1	2	3	4	5	18. The methods used in determining faculty promotion and tenure	6	5	4	3	2	1	N/a	7, 8
1	2	3	4	5	19. The use of research and publications in determining salary increments	6	5	4	3	2	1	N/a	9, 10
1	2	3	4	5	20. The policies regulating sabbatical leave	6	5	4	3	2	1	N/a	11, 12
1	2	3	4	5	21. The provision for sick leave	6	5	4	3	2	1	N/a	13, 14
1	2	3	4	5	22. Prospects for a comfortable retirement	6	5	4	3	2	1	N/a	15, 16
1	2	3	4	5	23. Your feeling of job security	6	5	4	3	2	1	N/a	17, 18
1	2	3	4	5	24. The number of hours you teach per week	6	5	4	3	2	1	N/a	19, 20
1	2	3	4	5	25. The time available for the preparation of lectures	6	5	4	3	2	1	N/a	21, 22
1	2	3	4	5	26. The number of non-teaching duties performed by you	6	5	4	3	2	1	N/a	23, 24
1	2	3	4	5	27. Your assignment to teach particular courses	6	5	4	3	2	1	N/a	25, 26
1	2	3	4	5	28. Your freedom to select the subject matter for your courses	6	5	4	3	2	1	N/a	27, 28
1	2	3	4	5	29. Availability of library and audiovisual resources	6	5	4	3	2	1	N/a	29, 30
1	2	3	4	5	30. The physical conditions of your classrooms and labs	6	5	4	3	2	1	N/a	31, 32
1	2	3	4	5	31. Availability of useful advice when necessary in the problems encounted as an educator	6	5	4	3	2	1	N/a	33, 34
1	2	3	4	5	32. Your relationship with administrator(s)	6	5	4	3	2	1	N/a	35, 36
1	2	3	4	5	33. The congeniality of your professional colleagues	6	5	4	3	2	1	N/a	37, 38
1	2	3	4	5	34. Your relationship with students	6	5	4	3	2	1	N/a	39, 40
1	2	3	4	5	35. Opportunity to help others find success	6	5	4	3	2	1	N/a	41, 42
1	2	3	4	5	36. The sense of responsibility of the students	6	5	4	3	2	1	N/a	43, 44
1	2	3	4	5	37. The minimum acceptable level of student achievement in your program	6	5	4	3	2	1	N/a	45, 46
1	2	3	4	5	38. The status accorded to educators in your profession within your university	6	5	4	3	2	1	N/a	47, 48
1	2	3	4	5	39. Your feeling of achievement as an educator	6	5	4	3	2	1	N/a	49, 50
1	2	3	4	5	40. Recognition of your work by others	6	5	4	3	2	1	N/a	51, 52
1	2	3	4	5	41. Intellectual stimulation in your work	6	5	4	3	2	1	N/a	53, 54
1	2	3	4	5	42. Opportunity for professional growth	6	5	4	3	2	1	N/a	55, 56
1	2	3	4	5	43. Opportunity to do research	6	5	4	3	2	1	N/a	57, 58
1	2	3	4	5	44. Opportunity to use your initiative	6	5	4	3	2	1	N/a	59, 60
1	2	3	4	5	45. Opportunity to use your knowledge and skills	6	5	4	3	2	1	N/a	61, 62
1	2	3	4	5	46. Your participation in decision making process in your school/department	6	5	4	3	2	1	N/a	63, 64
1	2	3	4	5	47. Opportunity to do socially significant tasks	6	5	4	3	2	1	N/a	65, 66
—	—	—	—	—	48. On the whole, how satisfied are you with your job as an educator?	6	5	4	3	2	1	—	■, 68
1	2	3	4	5	49. On the whole how important is the job you do as an educator in your program?	—	—	—	—	—	—	—	67, ■

50. SECTION III. JOB ASPECT SATISFACTION AND DISSATISFACTION ___3

C/C

Think of the times when you have felt EXCEPTIONALLY *satisfied* with your job and then respond to the following questions.

Which *two* incidents contributed most to this *feeling* of exceptional *satisfaction* with your position as an educator in Rehabilitation Medicine? (please itemize your responses)

1. 6, 7

2. 8, 9

Think of the times you have felt EXCEPTIONALLY *dissatisfied* with your job and then respond to the following questions.

Which *two* incidents contributed most to this *feeling* of exceptional *dissatisfaction* with your position as an educator in Rehabilitation Medicine? (please itemize your responses)

1. 10, 11

2. 12, 13

Thank you for your cooperation.

Please return by September 25, to Alphonso Ossoba in the return paid, addressed envelope.

APPENDIX B

Letters of Transmittal

THE UNIVERSITY OF ALBERTA

Department of Educational Administration
EDMONTON, ALBERTA, CANADA T6G 2G5 TELEPHONE 432-5241

May 17, 1979

Department of Speech Pathology and
Audiology
308B Corbett

Dear

Re: My Study on the "Job Satisfaction and Mobility of Educators in Rehabilitation Medicine in Canada."

Thank you for agreeing to participate in the pilot testing of my questionnaire instrument for this study. Please may I request that you follow these procedures:

(1) Choose your own code number which you will put on the first page of the questionnaire.

(2) You will need to sign on the same code number for the second questionnaire which I shall send to you within two weeks of your completing this first one.

(3) Please keep a record of the time it takes you to complete the questionnaire.

(4) Be prepared to provide me with feedback on the content and your reaction to the questions.

Please omit the preliminary questions, and question #1 of page 1.

Thank you very much for your co-operation.

Yours sincerely,

Alphonso Onuoha

AO/pk

THE UNIVERSITY OF ALBERTA

Department of Educational Administration
EDMONTON, ALBERTA, CANADA T6G 2G5 TELEPHONE 432-5241

June 6, 1979

Dear

Re: My Study on the "Job Satisfaction and Mobility of Educators in Rehabilitation Medicine in Canada."

Thank you for participating in the first phase of the pilot testing of my questionnaire instrument for the above study. I am grateful to you for the feedback, both oral and written, which you provided to me.

Most of the suggestions and modifications have been incorporated in the present questionnaire. In completing the enclosed questionnaire may I request that you follow these procedures:

(1) Sign on the same code number that you had chosen during the first round.

(2) Omit the preliminary questions and question #1 on page 1.

(3) Please complete all parts of the questionnaire that are applicable to you.

(4) Please return the complete questionnaire by June 19th if possible through campus mail, using the above address.

Thank you very much for your help and cooperation.

Yours very sincerely,

Alphonso Onuoha

AO/pk
Encl.

THE UNIVERSITY OF ALBERTA

Department of Educational Administration
EDMONTON, ALBERTA, CANADA T6G 2G5 TELEPHONE 432-5241

July 11, 1979

I am a doctoral candidate presently working in the above department. In partial fulfillment of the requirements for a Ph.D., I am conducting a study on the Job Satisfaction and Factors of Mobility of Educators in Rehabilitation Medicine in Canada -- specifically, physical and occupational therapy educators. My supervisor on this study is Dr. C. Bumbergar.

Prior to embarking on my study here, I was an educator for ten years and a head of a program in physical therapy for three years. I feel I am aware of the demands on your time at this time of the year but hope you will be able to participate . My study will involve only faculty members of physical and occupational therapy programs in eleven Canadian Universities, who will be full-time in 1979-80.

Excluded from the study are

(1) faculty members who will be on sabbatical/study leave in 1979/80

(2) part-time faculty members

(3) faculty members who had no clinical preparation in occupational therapy or physiotherapy.

In order to conduct this study, I need your assistance in identifying eligible faculty members. I would very much appreciate it if you could provide me at your earliest convenience the following information.

(a) The names of the members of your faculty who will be on full-time appointment in September 1979, and

(b) Their campus addresses

Following the receipt of the above information, I shall be forwarding in September 1979, invitations to participate in the study to the individuals identified, along with the copies of my questionnaire to be completed should they agree to participate. The questionnaires will be completed anonymously and the results will be reported as grouped data only, with no identification what-so-ever, of individuals, departments or schools. A return stamped, addressed envelope is enclosed for your reply.

Thank you very much for your help and cooperation.

Yours sincerely,

Alphonso R.A. Onuoha
M.Ed., B.P.T., Dip. T.P.

ARAO/pk
Encl.

July 17, 1979

Mme
Directeur
Ecole de Réadaptation
Université de Montréal
Pavillon Marguerite - d' Youville
2375 ch. Côte Ste - Catherine
Montreal, Québec
H3T 1A8

Dear Mme

I posted a letter to you last week soliciting the names of your 1979/80 full-time academic staff who might be participating in my study of Job Satisfaction and Factors of Mobility of Education in Rehabilitation Medicine in Canada.

In view of the fact that my questionnaire is in English, and I want to ensure that I have close to 100% return, could you please advise me if there are some eligible members of your faculty who may not be comfortable with responding to questionnaires which are in English rather than in French.

If there are any such candidates, I shall endeavor to arrange for French translations of my questionnaire and the instructions right away and not count the cost of doing so.

Thank you once again for your kindness.

Yours sincerely,

Alphonso Onuoha

AO/pk

FACULTY OF EDUCATION
DEPARTMENT OF EDUCATIONAL ADMINISTRATION

THE UNIVERSITY OF ALBERTA
EDMONTON, CANADA
T6G 2G5

September 19, 1979

Dear Colleague:

In view of the variability in the postal services we receive, I am checking back with you about a letter I mailed to you on September 4, 1979. It was with regard to my study on "The Job Satisfaction and Factors of Mobility of Educators in Rehabilitation Medicine in Canada."

Some completed returns have already been received, but as you are aware, to be of maximum value and representative of the actual situation of educators in our field a high percentage of returns is needed.

Since all questionnaires are anonymous, I am contacting all those to whom the original letter was sent except those who have sent in a request for information on the findings. If you have already completed and returned the questionnaire please accept my sincere thanks and my apologies for contacting you again.

If you have simply put the questionnaire aside for later completion it would be greatly appreciated if you could kindly finish and return it soon.

Yours sincerely,

Alphonso R.A. Onuoha

ARAO/pk

September 4, 1979

Dear Colleague,

I am a doctoral candidate presently working in the above department. In partial fulfillment of the requirements for a Ph.D., I am conducting a study on the Job Satisfaction and Factors of Mobility of Educators in Rehabilitation Medicine in Canada--specifically Physical and Occupational Therapy educators. My supervisor on this study is Dr. C. S. Bumbarger.

Prior to embarking on my study I was a physical therapy educator for ten years including three years as a director of a physiotherapy program.

My study involves the 1979/80 full-time faculty members in Physical and Occupational Therapy programs in eleven Canadian universities. My research questionnaire has been pilot tested, validated and approved for the study by my dissertation committee.

May I take this opportunity to invite you to participate in my study and assist me by completing the enclosed questionnaire. I know that you all are busy at this time of the year, yet I hope you will find time to complete all parts of the questionnaire despite your busy schedule. On the pilot test most people devoted about 18 minutes to completing the questionnaire.

As you can see, there is no provision made for your name on the questionnaire. You are therefore requested to please complete it anonymously and be assured that total anonymity is guaranteed. The results will be reported as grouped data only, with no identification of persons, schools or departments.

I would appreciate receiving your duly completed return in the enclosed, return paid, addressed envelope by September 25, 1979. Please complete and return also the enclosed post card only if you would like to receive information on the findings of the study.

Thank you very much for your help and cooperation.

Yours sincerely,

Alphonso Onuoha
M.Ed., BPT., Dip. TP, MCSP

Chester S. Bumbarger
C. S. Bumbarger Ph.D.

AO/ab1

THE UNIVERSITY OF ALBERTA

Department of Educational Administration
EDMONTON, ALBERTA, CANADA T6G 2G5 TELEPHONE 432-5241

October 15, 1979.

Dear

To start with I must apologize for being somewhat of a nuisance! I sent you a questionnaire on September 4th 1979 and requested that you assist me in my studies by completing and returning it to me. To date I have not received a response from you.

Much as the response presently is 73.8%, all the same, I would like to obtain your input as I believe that a higher return would lend strength to my study. I realize that at this time of the year you probably have more immediate things requiring your attention. However, the return of the completed questionnaires is of extreme importance to me in my study.

Therefore, I would be very grateful if you would kindly assist me by completing and mailing the questionnaire to me as soon as possible. Please be reassured that total anonymity is guaranteed.

If, for some reason you do not wish to comply with my request, kindly return the questionnaire to me uncompleted. In such a case, it would even be to my interest to learn from you the reason(s) for non-compliance.

Thank you for your time and assistance.

Yours sincerely,

Alphonso R.A. Onuoha

ARAO/pk

P.S. If you have already returned the questionnaire, accept my apologies for bothering you and thank you for your assistance.

APPENDIX C

Collated Samples of the Critical Incidents Narrated by the Respondents

ABSTRACTS OF SOME OF THE CRITICAL INCIDENTS

Some abstracts of the responses to the narrative section of the questionnaire are provided in this section of the Appendices. The written format of critical incidents is a modification to Herzberg's original methodology in which questions were asked orally in a semi-structured interview.

By providing a limited space for the response to the questions and by asking the subjects to be brief, respondents were forced to be concise, thereby simplifying the coding of the responses.

The samples of both positive and negative statements where applicable are provided under each job aspect identified from the content analysis of the critical incidents reported.

ACHIEVEMENT

Positive Statements

"I was nominated and awarded the most distingushed teaching award of the University on the Founders' Day, having been selected from among 5000 faculty members."

"Obtaining funding for research, and having an article accepted for publication."

"The applause he received (a former student) at a Scientific session brought tears of satisfaction to my eyes."

"Seeing former students who had problems during the years in school, graduate, become competent therapists and take senior positions in local hospitals."

"When the Baccalaureate degree was given a final approval - - - and implemented to replace the diploma program."

Negative Statements

"Report of poor performance on the part of students I have taught in both oral and practical examinations."

"Loss of students who with adequate counselling would probably have remained on the course."

"Perceived poor level of performance of graduates in the clinical field a few years after graduation."

RECOGNITION

Positive Statements

"When past students have returned and said that my course materials had been useful and pertinent to their work experience."

"Receiving an invitation to address O.T. organization outside Canada and receiving travel grants from large Canadian agencies to present such papers/address."

"Nomination by students as candidate for excellence in teaching given annually by the university."

"Request for outside teaching based on recommendations of students about university courses given by me."

"Receiving a copy of an article written in a students' journal about my exceptional performance as a professor."

Negative Statements

"Lack of appreciation of one's efforts by superiors."

"Students'and clinicians' lack of appreciation for the efforts expended on their behalf, with no initiative or resourcefulness offered by them at certain times."

ADVANCEMENT

Positive Statements

". . . my award of full professorship."

"Being recognized for contributions via verbal feedback and merit pay."

"Being appointed a director of a school when the usual practice was to appoint Medical directors."

". . . extension of my appointment from sessional to full-time and promotion to Associate professor."

Negative Statements

"Lack of opportunity for academic advancement."

RESPONSIBILITY

Positive Statements

"When I became aware of the fact that my courses were exclusively mine, to be handled in my own way."

"When I first felt the freedom which comes with this position and which allows me to use my initiative, and self-direction to do the best job possible."

"Mandate to develop research facilities in the school and encouragement from the director (but the director alone!)."

Negative Statements

"Lack of opportunity assume responsibilities."

"Failure of the medical schools here and elsewhere to recognize that P.T. is more than a service department and has a strong research obligation (or responsibility)."

"Having an M.D. as the director tends to inhibit development of P.T. programs."

"Failure to recognize the professional responsibility and expand the curriculum to incorporate community care and industrial analysis in O.T. curriculum."

"Finding it was assumed, erroneously, that I wanted to carry less committee (administrative) responsibility."

"Frustrated and angered by limitation placed upon students and physiotherapists by other professionals, thus inhibiting growth."

"Consistent frustrations in ignorant meddling with student training by medical profession and attempts by the latter to control the profession (pyhsiotherapy)."

"Having to teach with another staff member as an assistant in the lab when the staff person had done virtually no preparation and was not clinically au fait enough to teach the course."

"Relationship and dependence upon "medical academic colleagues."

"The threat of Provincial Government interference in the program especially the intern program."

"When colleagues attempt to impose their "will" upon my course materials, given that they are not in the same "field" as I am."

WORK CONTENT

Positive Statements

"The variability of course content and its relation to a broad context."

"When course planning and preparation had resulted in coordinated, meaningful classes without the (unfortunately frequent) interferences of schedules, changes and reorganizations etc.."

"Opportunity to pursue graduate courses while continuing as full-time educator."

"Opportunity to do research and teach also."

"Teaching interesting courses that I have special interest in."

Negative Statements

"Lack of knowledge of how to be a good teacher."

"Continued need to teach subject material I don't believe in because of the need to train students in techniques that they are expected to know in the clinical field."

"Being put in a position of responsibility for which I was not prepared nor was the person who put me in that position."

"The lack of research activity and academic rigor in the school is very disheartning."

WORK CONTEXT

Negative Statements

"The Dean indicated that only publications in highly reputable journals were worth any merit. His philosphy stresses a high research component, however our program faculty has such teaching loads and other responsibilities that we cannot afford much time to do

research. We lack facilities and knowledgeable personnel in this regard as well."

"Budget preparation is extremely frustrating. Attempting to run a program which is expanding but is receiving reduced funds year after year is perhaps the one area which makes me feel exceptionally dissatisfied."

"The unavailability of research facilites in terms of equipment. . . etc in view of the past positive emphasis of the school on teaching only."

"Frustration that sometimes I don't have enough time to help students with their difficulties . . . excessive teaching load eg. 15-18 student contact hours per week."

"Inability to keep on top of work so that things are being done today which should have been done "yesterday."

"When administration and teaching tasks have been too numerous and each has interferred with satisfactory accomplishment of the other."

"Lack of adequately qualified and capable educators in the program and difficulty of obtaining adequate and suitable clinical facilities."

"When teaching load was pressured because of demands of extra administrative work-membership on committees etc.."

"The feeling of "burnt out" at the beginning of the academic year when faced with the prospect of a full teaching load, heavy administrative duties and the pressure of being a graduate student carrying a heavy course load and being expected to do research and revise the course material."

INTERPERSONAL RELATIONSHIP WITH COLLEAGUES

Negative Statements

"Emotional responses and decisions made by some of my peers which were based on personality and which have affected my careers pattern on several occasions."

"A trend of so many faculty members to enhance an educational philosophy that says "students should have the priviledge of failing if they cannot accept my explanations and expectations". And I thought that every student should be given every opportunity to querry and test current theories."

"When faculty members are unwilling to work together to facilitate advancement of program."

"Conflict with colleague who is interested only in personal goals and not the goals of the students or the goals of the school and the frustration with the bureaucratic procedure that appears to make it impossible to deal constructively with the situation."

"Interaction with colleagues who never see change in curriculum course structure, appointment and graduate work as being a positive benefit for P.T. in general."

"The general "infighting" and"territorial stakeouts" that appear to overide the cooperative working and sharing of ideas/skills."

"At one instance I felt I had no credibility with nearly all the faculty members, and I could not identify the cause.
In later years I have felt very depressed and dissatisfied with the fact that it was becoming very difficult to work with other educators as a team, each faculty member wishes more and more autonomy."

"When colleagues decide to form a "group" to get in opposition to the more progressive teachers and when members of my faculty made fools of themselves by each accusing the other of incompetence in front of students."

"Lack of cohesion among the members of the faculty. There are a lot of interpersonal problems."

"Lack of support from professional colleagues when new change processes are initiated."

"Seeing poor relationship between full time clinicians and full time faculty in clinical education of students."

INTERPERSONAL RELATIONSHIP WITH STUDENT

Positive Statements

"Opportunity to work with students and watch them progress and become contributing members to the field of Rehabilitation Medicine."

"I was most gratified at the exceptionally high degree of student interest and participation in a recent research project."

". . . An occasion when 60 students were ready to boycott a course for valid reasons, as a result of my meeting with them and through discussion we finally came to a happy meduim where all the embarrasing effect of boycotting a course wete (sic!) avoided and actions were taken to remedy the situation."

Negative Statements

"When I let down my students by not responding adequately to a question on their area of interest because I did not prepare enough my dissertation (sic!)."

"Student selfishness - taking other peoples' work on their behalf for granted."

POLICY AND ADMINISTRATION

Negative Statements

"Using peer evaluations in promotions and tenure decisons especially when peers have no knowledge of subject matter innovative educational techniques and have not really observed classroom performance."

"Incompetence to a certain extent, tends to be supported in Rehab perhaps inorder to maintain the "status quo" disregarding the comments on objective evaluation I was asked to make on two individuals was a way of keeping things on an even keel. They promote incompetence."

"Having administrative policies which directly affect my job performance, imposed from above with no room for discussion or input."

"Lack of sensitivity of those in positions of administrative power to the positive or negative aspects of my job ie dissatisfaction stems from administrative rigidity which stifles creativity initiative and development."

"Administrative policy regarding the curricula requirements of Arts and Science credits which does not allow time for professional course expansion having to squeeze the whole professional curriculum in P.T. and the Arts and Science requirements into three years does not allow for the depth of training that I would desire for students."

"The general condescending attitude of the university administrators towards the academic staffs in the school, based on past performance of staff members resulting in poor status being accorded to us."

"Major decision making on vital points taken without my knowledge and contribution."

"Poorly thought out decisions handed down by department and /or faculty administrators which later had to be revised on appeal to university administration, causing much mental anguish."

"New appointments were made in the department which had obvious political components."

"When I felt some injustice from the administrator of the department about delegation of tasks."

"Ineffective leadership from Division head."

"Disorganization in faculty and staff meetings.
When progress is not made because of lack of organization."

"The realization that senior administrative staff at the university do not give a damn about the problems of a small department, as long as it remains quiet and does not "rock the boat" . This is exceptionally illustrated, when students' complaints concerning course offerings from another faculty and department received scant hearing because of the politics involved ."

"Problem of finally getting sabbatical leave - because of difficulties with university administration in understanding particular requirements of P.T. educators ."

"Seeing students dissatisfied and developing very critical attitudes because of lack of policy and poor attention to poor procedural details within the school. Also, having to defend the school but at the same time recognize the need for change administratively."

REWARD SYSTEM

Negative Statements

"When a person was promoted as associate professor who I felt had not a strong enough record to be promoted."

"Being forced to resign to go in for a Master's program instead of being supported to carry on, on some other arrangement."

"Inability to obtain sabbatical leave within this faculty."

"Lack of support by the Dean - probably lack of initiative on the part of the dean to prevent discrimination in special salary adjustments."

"When individuals of higher rank and higher salary do not contribute extensively to the program and still receive similar salary increments to my own when they achieve half the work."

"Carrying an exceptional high course load - 18 contact hours per week plus administration, producing scholarly works and being involved in professional development, upon all there I am receiving the same reward as someone of higher rank who has nothing more than lab. teaching."

"The department has some very highly paid, tenured faculty who are poor teachers, have minimual clinical background and contribute little to the department. The junior faculty who are all good teachers and expert clinicians are grossly underpaid and over worked."

"Working with people of questionable competence who are high in rank, have tenures and receive much higher salaries than others and myself who carry more responsibility and larger work load."

CONSTRAINTS IN PERSONAL LIFE

Negative Statements

"Working with faculty who view personal academic skills upgrading as an obligation rather than self fulfillment and for personal satisfaction."

"Expected to participate in non-productive committee or faculty meetings."

"Failure of staff to appreciate the time involvement in research related activities, as opposed to teaching activities."

"Lack of ability to complete upgrading any academic qualifications at the same time as fulfilling my job requirements."

"When long working hours make it necessary to be away from family during weekends and there is no time to take an annual vacation."

"The weekend before the new session starts and I have not got all the materials prepared as I would like. . . trying to keep pace with a variety of expectations and aspirations - clinical work, one's own continuing education, professional and university commitment etc. It can be exaspirating."

"After a particularly hectic day this summer I met one of the clinical therapists who asked "what are you doing with your 5 months off this summer?" A typical example of how seriously misunderstood the role of educator in a professional school really is."

"Demands and expectations to carry heavy teaching load, hold membership on committees etc. as well as ones responsibility for organizing and producing courses in continuing education, not to mention ones personal commitments, frustration with the lack of time available to work on my own research as expected."

"Excessive demands in administrative responsibilities."

APPENDIX D

Percentage Frequency Distribution of Responses to the 31 Job Facets

Table 49

Percentage Frequency Distribution of Responses to the 31 Job Facets

IMPORTANCE						SATISFACTION							
Unimportant 1	Slightly important 2	Moderately important 3	Very important 4	Extremely important 5	Please rate your *current level of satisfaction/dissatisfaction with each* of the following items in relation to your job and also indicate *the importance of each of them to your satisfaction* with your job. Please circle the selected rating for both *Importance* and *Satisfaction* components of each item.	Highly satisfied 3	Moderately satisfied 2	Slightly satisfied 1	Slightly dissatisfied -1	Moderately dissatisfied -2	Highly dissatisfied -3	Not applicable 0	Percentage Satisfied
3.2	3.2	9.6	37.2	12.8	17. The salary you receive	29.8	41.5	9.6	6.4	5.3	4.3	3.2	80.9
2.1	7.4	13.8	47.9	28.7	18. The methods used in determining faculty promotion and tenure	11.9	41.5	14.9	7.4	12.8	9.6	2.1	68.1
9.4	11.7	41.5	23.4	16.0	19. The use of research and publications in determining salary increments	5.3	28.7	18.1	13.8	13.8	4.3	16.0	52.1
3.2	4.3	29.8	36.2	26.6	20. The policies regulating sabbatical leave	24.5	28.7	14.9	7.6	10.6	7.4	7.4	69.9
5.3	10.6	20.2	37.2	26.6	21. The provision for sick leave	69.1	22.3	3.2	2.1	0	2.1	0	94.5
5.3	8.5	18.1	34.0	34.0	22. Prospects for a comfortable retirement	29.8	35.1	12.8	6.4	5.3	0	6.4	81.9
2.1	6.4	19.1	33.0	39.4	23. Your feeling of job security	33.0	34.0	13.3	7.4	5.3	4.3	2.1	80.9
1.1	3.2	20.2	46.8	28.7	24. The number of hours you teach per week	24.5	47.9	7.4	8.5	7.6	0	2.1	79.8
2.1	2.1	13.8	36.2	45.7	25. The time available for the preparation of lectures	21.3	31.9	21.2	12.8	7.4	5.3	1.1	73.4
3.2	5.3	26.6	39.4	25.5	26. The number of non-teaching duties performed by you	13.8	36.2	20.2	13.8	9.6	4.3	2.1	70.2
4.3	1.1	6.4	29.8	58.5	27. Your assignment to teach particular courses	46.9	25.5	11.7	6.4	1.1	2.1	4.3	86.1
2.1	0	3.2	17.0	77.7	28. Your freedom to select the subject matter for your courses	57.0	26.6	3.2	0	1.1	0	2.1	96.8
0	1.1	7.3	28.7	66.0	29. Availability of library and audiovisual resources	44.7	33.0	7.6	6.4	4.3	2.1	0	97.3
1.1	2.1	19.1	36.2	41.5	30. The physical conditions of your classrooms and labs	13.8	35.1	14.7	16.0	9.6	13.8	0	60.5
1.1	5.3	9.6	33.0	51.1	31. Availability of useful advice when necessary in the problems encounted as an educator	35.1	37.8	17.0	5.2	2.4	5.3	2.1	91.7
0	5.3	11.7	31.9	51.1	32. Your relationship with administrator(s)	29.8	16.8	8.5	4.3	6.4	4.3	0	85.1
0	3.2	16.0	27.7	53.2	33. The congeniality of your professional colleagues	36.2	42.6	9.6	5.3	6.4	0	0	89.4
0	0	4.3	26.6	69.1	34. Your relationship with students	48.9	41.5	4.3	2.1	2.1	0	1.1	94.7
1.1	2.1	19.1	33.0	40.4	35. Opportunity to help others find success	22.3	54.3	13.8	3.2	1.1	0	5.3	91.4
3.2	1.1	4.3	38.3	53.2	36. The sense of responsibility of the students	20.2	53.2	13.8	5.3	2.1	1.1	4.3	87.2
5.3	0	9.6	35.1	50.0	37. The minimum acceptable level of student achievement in your program	22.3	52.1	9.4	6.4	4.3	1.1	6.4	81.8
1.1	1.1	24.5	35.1	38.3	38. The status accorded to educators in your profession within your university	9.6	33.0	24.5	13.8	8.7	5.3	2.1	67.1
0	1.1	1.1	35.1	62.9	39. Your feeling of achievement as an educator	22.3	51.1	17.0	5.3	3.2	0	1.1	90.4
1.1	9.3	20.2	46.8	22.7	40. Recognition of your work by others	12.8	37.9	18.1	7.4	4.3	0	0	38.3
1.1	0	3.2	24.5	71.3	41. Intellectual stimulation in your work	31.9	48.9	9.6	2.1	3.2	3.2	1.1	90.4
2.1	0	5.3	29.8	62.8	42. Opportunity for professional growth	25.5	40.4	18.1	9.5	5.3	4.3	2.1	84.0
2.1	5.3	20.2	22.3	50.0	43. Opportunity to do research	14.9	25.5	21.3	8.5	8.5	13.8	7.4	61.7
0	0	2.1	25.5	72.3	44. Opportunity to use your initiative	41.5	45.7	5.3	5.3	1.1	1.1	0	92.5
0	0	5.0	20.2	78.5	45. Opportunity to use your knowledge and skills	39.4	46.8	5.3	4.3	2.1	2.1	0	91.5
1.1	0	12.8	29.8	55.3	46. Your participation in decision making process in your school/department	27.7	40.4	11.7	8.5	4.3	7.4	0	77.8
9.4	11.7	36.2	27.8	14.9	47. Opportunity to do socially significant tasks	20.2	44.7	17.0	9.6	0	0	8.5	81.9
—	—	—	—	—	48. On the whole, how satisfied are you with your job as an educator?	27.7	57.9	7.4	4.3	2.1	1.1	0	92.5
0	0	17.2	41.5	39.4	49. On the whole how important is the job you do as an educator in your program?	—	—	—	—	—	—	—	

APPENDIX E

Significant Differences on Some Job Facets Based on Further Tertiary Analysis

Table E.1

Comparison of the Mean Satisfaction Score on Some Job Facets of Educators in Rehabilitation Medicine Grouped by Education Levels

Facet	Educational Level	Number of Respondents	Mean Scores	Standard Deviations	F Value	probability	Groups Significantly Different [a] 1 2 3
Salary	1. Baccalaureate	23	1.65	7.46	4.40	0.015	
	2. Teaching Certificate	22	6.05	5.21			†
	3. Masters Degree/ Doctorates	49	6.27	6.22			†
Job Security	1. Baccalaureate	23	3.30	7.86	3.59*		
	2. Teaching Certificate	22	9.18	5.93			†
	3. Masters Degree/ Doctorates	49	5.73	7.76			
	Total	94	5.95	7.61			
Work Recognition	1. Baccalaureate	23	3.78	6.37	3.14*	0.0481	
	2. Teaching Certificate	22	7.41	4.12			†
	3. Masters Degree/ Doctorates	49	6.59	5.12			
	Total	94	6.10	5.37			

[a] Scheffé Multiple Comparison of Means set at .10 level.
† Groups significantly different.
* F.05 for 2/91 df ≥ 3.10.

Table E.2

Comparison of the Mean Satisfaction Score on Some Job Facets of Educators in Rehabilitation Medicine Grouped by Academic Rank

Facet	Academic Rank	Number of Respondents	Mean Scores	Standard Deviations	F Value	probability	Groups Significantly Different [a] 1 2 3
Salary	1. Below Asst. Professor	17	1.59	8.08	6.30*	0.0027	
	2. Assistant Professor	42	4.24	7.22			
	3. Associate Professor and Professor	35	7.80	3.42			† †
	Total	94	5.09	6.62			
Intellectual Stimulation	1. Below Asst. Professor	17	10.24	4.37	3.59*	0.0316	
	2. Assistant Professor	42	6.71	8.56			
	3. Associate Professor and Professor	35	10.40	4.13			†
	Total	94	8.72	6.72			
Participation in Decision Making	1. Below Asst. Professor	17	5.06	7.39	4.74*	0.0111	
	2. Assistant Professor	42	3.79	9.63			
	3. Associate Professor and Professor	35	9.46	6.53			†
	Total	94	6.13	8.53			

[a] Scheffé Multiple Comparison of Means set at .10 level.
† Groups significantly different.
* F.05 for 2/91 df ≥ 3.10.

Table E.3

Comparison of the Mean Satisfaction Score on Some Job Facets of Educators in Rehabilitation Medicine Grouped by Publications

Job Facet	Number of Publications	Number of Respondents	Mean Scores	Standard Deviations	F Value	probability	Groups Significantly Different [a] 1 2 3
Sabbatical Leave Policies	1. None	49	1.67	8.60	3.18*	0.0464	
	2. 1 - 2	21	4.95	7.85			
	3. 3 or more	24	6.29	6.13			†
	Total	94	3.59	8.06			
Doing Socially Significant Task	1. None	49	4.53	4.95	3.38*	0.0383	
	2. 1 - 2	21	7.48	3.57			†
	3. 3 or more	24	6.46	4.88			
	Total	94	5.68	4.78			

[a] Scheffé Multiple Comparison of Means set at .10 level.
† Groups significantly different.
* F.05 at 2/91 df ≥ 3.10.

Table E.4

Comparison of the Mean Satisfaction Score on Some Job Facets of Educators in Rehabilitation Medicine Grouped by Number of Scientific Presentations

Job Facet	Number of Presentations	Number of Respondents	Mean Scores	Standard Deviations	F Value	probability	Groups Significantly Different[a] 1 2 3
Number of Non-Teaching Duties	1. None	33	0.70	8.94	4.54*	0.0132	
	2. 1 - 2	27	3.48	5.41			
	3. 3 or more	34	5.91	6.15			†
	Total	94	3.38	7.35			
Availability of Library and A/V Resources	1. None	33	5.48	9.14	5.19*	0.0073	
	2. 1 - 2	27	10.78	4.81			†
	3. 3 or more	34	10.15	6.43			†
	Total	94	8.69	7.45			

[a] Scheffé Multiple Comparison of Means set at .10.
† Groups significantly different.
* F.05 at 2/91 df $\geq$ 3.10.

Table E.5

Comparison of the Job Facet Satisfaction Mean Scores on 'Recognition' of Educators in Rehabilitation Medicine Grouped by Mobility Characteristics

Mobility Characteristics	Number of Respondents	Mean Scores	Standard Deviations	DF	t Value	2-Tail probability
Non-mobile	68	5.25	5.22	92	-2.54	0.013
Mobile	26	8.31	5.22			

t.05 at 92 df = ±1.98