JOB SATISFACTION IN CRITICAL CARE NURSES

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to the required standard

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Date April 10, 1992
Abstract

This descriptive study was designed to explore job satisfaction among critical care nurses using an established conceptual framework of job satisfaction entitled the Job Characteristics Model (Hackman & Oldham, 1980). The standardized measures of general job satisfaction and other job design variables were the Job Diagnostic Survey (Hackman & Oldham, 1980) and the Index of Job Satisfaction (Brayfield & Rothe, 1951). These were sent to a random sample of 300 employed critical care nurses in British Columbia. 127 usable questionnaires were returned and formed the basis for the results. The nurses found task significance and skill variety the strongest characteristics of motivating potential, task identity the lowest. The strongest relationships were seen between general job satisfaction and motivating potential of the job, meaningfulness of the work, and context satisfactions. There was also a significant relationship between general job satisfaction and length of nursing experience.
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Years of Nursing Experience
Maturity
Employment Tenure
Area of Practice
Employment Status

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Critical Psychological States
Context Satisfactions
Pearson Product Moment Correlations
Multiple Regression Analysis

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Chapter One

Introduction

The health care industry is the fourth largest service industry in Canada (Jenny, 1982). Increasingly, health care facilities are growing in size and complexity. Hospitals are feeling pressure resulting from technology, the expectations of workers, and the demands made upon them from a complex environment (Kahn & Westley, 1984).

Critical care units within hospitals are areas of concentrated technological, medical, and nursing care aimed primarily at physiological monitoring and treatment of seriously ill patients (Baggs, 1989). The development of critical care areas has helped to revolutionize health care (Allen, Jackson & Youngner, 1980). Patients who would not have lived five to ten years ago are now being saved due to technological advancement (Scherer, 1987). The services supplied to critically ill patients include close monitoring, life support, and concentrated care, particularly nursing care (Lave & Knaus, 1989). This increased sophistication with medical technology has resulted in major changes in clinical services. Intensive care beds service five percent of the patient population, but require fifty percent of the supply of nursing (Jenny, 1982).

The higher staffing ratio in critical care units compared
to elsewhere in the hospital is seen as consistent with the technological complexity and intensity of nursing needs for the patient (Searle, 1988). Critical care areas need specifically educated registered nurses, with many of these areas requiring staffing ratios of one nurse per patient (Jenny, 1982).

While technological advancement has increased the need for highly specialized nurses to staff critical care areas (Penny, 1986), the number of registered nurses willing to work in critical care areas has not kept pace with the service demands of the growing numbers of patients admitted to the units (Civetta, 1981). Searle (1988) estimated that in 1988 there was a vacancy rate of 13.8% for critical care nursing positions in the United States. Furthermore, the annual turnover rate of critical care nurses was 23%, while the number of critical care beds was increasing (Searle, 1988).

The Canadian literature has little documentation regarding the supply and demand for critical care nurses. Critical care areas account for a large proportion of registered nurses in hospitals. Of the 21,012 registered nurses performing direct patient care, 29.6% are critical care nurses (Health Manpower Research Unit, 1989). Further, 39% of all nurses employed within an acute care agency consist of critical care nurses (Registered Nurses Association of British Columbia, 1989).
A survey of British Columbia hospitals found the average annual turnover to be 32% of the registered nursing positions (Health Services Research and Development, 1984). The vacancies reported by health care agencies in British Columbia averaged about 460/month, 30 percent from critical care (Registered Nurses Association of British Columbia, 1988b). Another British Columbia study found that critical care areas have some of the highest number of difficult to fill vacancies in nursing (Health Manpower Research Unit, 1988b). The Ministry of Health in British Columbia spent 566,900 dollars to train additional nurses for understaffed critical care settings in 1988 (Registered Nurses Association of British Columbia, 1988b).

Turnover has significant cost implications. There are expenses due to the many costs incurred in recruiting and training replacement employees (Lawler, 1973). The estimated cost of replacing a registered nurse ranged from 3,000 dollars to one half of the first year's salary (BGI Management Consultants, 1981).

Many surveys in both Canada and the United States show that staff nurse turnover rates are correlated with job dissatisfaction (Canadian Nurses Association/Canadian Hospital Association, 1990; Godfrey, 1978a, b, c; Huckabay & Jagla, 1979; Huey & Hartley, 1988; Mendenhall, 1982; Wandelt, Pierce & Widdowson, 1981). In general, hospitals seem to be less satisfying places to work, and nursing
discontent manifests itself with job dissatisfaction and
turnover (Health Manpower Research Unit, 1988b). However,
studies of intensive care nurses found inconsistent results
regarding levels of job satisfaction and turnover when
compared to general duty nurses (Jacobson, 1983; McCloskey,
1974; Nichols, Springford, & Searle, 1981; Wakefield, Curry,

In the light of high vacancy rates, high turnover rates,
and the inconclusive results of research with respect to the
relationship between turnover of critical care nurses and
job satisfaction, it seems prudent to focus research on what
satisfies critical care nurses. One approach to this area
of study involves the area of work redesign. This method
examines the various factors, such as autonomy and feedback,
which lead to job satisfaction (Hackman & Oldham, 1980) as
well as general job satisfaction itself (Brayfield & Rothe,
1951). By understanding which job factors correlate
significantly to job satisfaction, job enrichment or
redesign can be accomplished to yield increased job
satisfaction.

Problem Statement

In British Columbia, almost 30% of patient care nurses
are critical care nurses (Registered Nurses Association of
British Columbia, 1988). Studies have revealed that there
are numerous staff vacancies as well as high turnover rates
in critical care areas. These positions are among the highest in the "difficult to fill" vacancies. There are limited Canadian studies on nurse job satisfaction; none were found focusing on critical care nurses. Comparing levels of general job satisfaction with certain job factors will assist in identifying what the significant job characteristics are. The identification of these factors will also assist in redesigning aspects of the job of nursing thus promoting satisfaction, and consequently improve productivity and retention.

Conceptual Framework

The conceptual framework for this study is the Job Characteristics Model of Hackman and Oldham (1980). The background to the model stems from Herzberg's (1966) motivation-hygiene theory explaining job satisfaction. Herzberg's (1966) motivation-hygiene theory is based on the notion that two distinct sets of factors affect a person at work. These factors, satisfiers and dissatisfiers, are not seen as opposites but distinct affective states resulting from different employment factors.

Herzberg's (1966) satisfiers are the challenging aspects of the work itself and the opportunities for personal growth. They include the opportunity for advancement and achievement, recognition, and respect received in one's work role. These intrinsic factors have the ability to motivate
people and contribute to job satisfaction.

The dissatisfiers identified by Herzberg (1966) are pay, quality of supervision, working conditions, human relationships, and company policy and administration. These variables are considered the extrinsic or hygiene factors. While satisfying these hygiene factors will not increase job satisfaction, their dissatisfaction with these factors are theorized to cause frustration. The key to making a job satisfying is not simply eliminating the dissatisfiers, but also providing satisfiers. Herzberg (1966) points to the difference between these two sets of factors, whose themes are job content and the environment.

Hackman and Oldham (1980) added two dimensions to Herzberg's theory. These concepts are: 1) individual differences with respect to job responses; and 2) quantification with respect to both the motivational potential of a particular job and the growth needs of the individual performing that job. The merging of these ideas resulted in the Job Characteristics Model which sees core job dimensions, critical psychological states, and personal and work outcomes in a causal relationship (Figure 1).
According to Hackman and Oldham (1980), this model attempts to specify conditions under which individuals will become internally motivated to perform their jobs effectively. The focus of this model is on the interaction among four groups of variables: the psychological states that must be present for internally motivated work behaviour to develop, the job dimensions that can create these states, the moderators or attributes of individuals which determine how positively the person will respond to the job, and

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### Figure 1

**Job Characteristics Model**

<table>
<thead>
<tr>
<th>CORE JOB DIMENSIONS</th>
<th>CRITICAL PSYCHOLOGICAL STATES</th>
<th>PERSONAL AND WORK OUTCOMES</th>
</tr>
</thead>
<tbody>
<tr>
<td>skill variety</td>
<td>experienced</td>
<td>high internal work motivation</td>
</tr>
<tr>
<td>task identity</td>
<td>meaningfulness</td>
<td></td>
</tr>
<tr>
<td>task significance</td>
<td>of the work</td>
<td></td>
</tr>
<tr>
<td>autonomy</td>
<td>experienced</td>
<td>high &quot;growth&quot; satisfaction</td>
</tr>
<tr>
<td>feedback</td>
<td>responsibility</td>
<td>high general job satisfaction</td>
</tr>
<tr>
<td></td>
<td>for outcomes of the work</td>
<td></td>
</tr>
<tr>
<td></td>
<td>knowledge of the actual results of work activities</td>
<td>high work effectiveness</td>
</tr>
</tbody>
</table>

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**Employee Growth Need Strength**

Knowledge and Skill Context Satisfactions

Hackman & Oldham, 1980, p.90.
personal and work outcomes. In general, the core job dimensions prompt the critical psychological states which, in turn, lead to personal and work outcomes. The links between these three dimensions are individual attributes which include individual growth need strength, knowledge and skill, and context satisfactions.

Each group of variables in the Job Characteristics Model will now be described in more detail. The initial set of variables include the core job dimensions (Hackman & Oldham, 1980):

1. skill variety. The degree to which a job requires a variety of different activities in carrying out the work, involving the use of a number of different skills and talents of the person (p.78).

2. task identity. The degree to which a job requires a completion of a "whole" and identifiable piece of work, that is, doing a job from beginning to end with a visible outcome (p.78).

3. task significance. The degree to which the job has a substantial impact on the lives of other people, whether those people are in the immediate organization or in the world at large (p.79).

4. autonomy. The degree to which the job provides substantial freedom, independence, and discretion to the individual in scheduling the work and in determining the procedures to be used in carrying it
5. job feedback. The degree to which carrying out the work activities required by the job provides the individual with direct and clear information about the effectiveness of his or her performance (p. 80).

The five core job dimensions are used to determine the overall motivating potential of a job, which prompt internal work motivation on the part of job incumbents (Hackman & Oldham). The measure to determine the motivating potential score (MPS) was formulated by Hackman and Oldham (1980) as follows:

\[
\text{Motivating Potential} = \text{variety} \times \text{identity} \times \text{significance} \times \text{autonomy} \times \text{job feedback}
\]

The second set of variables is the critical psychological states. These states are considered the major thrust of the model. The critical psychological states refer to the positive effects experienced when the individual learns that he/she personally performed a meaningful task well.

Hackman and Oldham (1980) define these states as follows:

1. Experienced meaningfulness of the work. The degree
to which the individual experiences the job as one which is generally meaningful, valuable and worthwhile (p.256).

2. Experienced responsibility for work outcomes. The degree to which the individual feels personally accountable and responsible for the results of the work he or she does (p.256).

3. Knowledge of results. The degree to which the individual knows and understands, on a continuous basis, how effectively he or she is performing the job (p.257).

The third set of variables in this model is the moderators. These variables are the effect that the individual's attributes have on a job.

The first variable includes knowledge and skill. For jobs high in motivating potential, people who have sufficient knowledge and skill to perform well will experience much satisfaction from doing well. Those who are not competent enough to perform well will experience a good deal of dissatisfaction from doing poorly. Conversely, for jobs low in motivating potential, the internal motivation will be low, and personal satisfaction will not be affected by how well one performs (Hackman & Oldham, 1980).

The second variable relates to growth need strength. This variable measures how the individual reacts to their work. The premise is that an individual will respond more
positively to a job high in motivating potential if they have a high need for personal growth and development, than an employee with a low growth need strength (Hackman & Oldham, 1976).

Context satisfactions is the last variable in this section. It deals with how satisfied individuals are with the work conditions. This may affect their willingness or ability to take advantage of the opportunities for personal accomplishment provided by the job (Hackman & Oldham, 1980).

The final set of variables presented in the Job Characteristics Model is personal and work outcomes. These variables include high internal work motivation, high "growth" satisfaction, high general job satisfaction, and high work effectiveness (Hackman & Oldham, 1980).

Purpose of the Study

The purpose of this study was to assess the level of general job satisfaction among critical care nurses. The relationship among general job satisfaction, motivating potential, critical psychological states, and context satisfactions were also investigated. Finally, the relationships between general job satisfaction and personal and professional characteristics of critical care nurses were examined.
Research Questions

1. What is the level of general job satisfaction in critical care nurses?

2. What is the relationship between general job satisfaction and the following variables: motivating potential, critical psychological states, and context job satisfactions?

3. What is the relationship between general job satisfaction and selected personal and professional characteristics of critical care nurses?

Definition of Terms

Context Job Satisfactions— the evaluation of conditions of one's job, not the job itself. These include job security, pay, coworkers, and supervision (Hackman & Oldham, 1980).

Critical Care Unit— a specialized unit which has been formed for the patient population with a variety of life threatening illnesses or conditions. Examples include patients in coronary care, emergency, and transplant units, or medical/surgical, neonatal, neurological, and pediatric intensive care units within a hospital.
Critical Care Nurse - diploma or baccalaureate graduate nurse employed at one of the above mentioned critical care units.

Critical Psychological States - the states created by the presence of core job dimensions. These include experienced meaningfulness of work, experienced responsibility for outcomes of work, and knowledge of the actual results of work activities (Hackman & Oldham, 1975, p.162).

General Job Satisfaction - an overall measure of the degree to which the employee is satisfied and happy with the job (Hackman & Oldham, 1975, p.162).

Motivating Potential - the overall potential of a job to prompt internal work motivation on the part of job incumbents as seen by the mathematical compilation of the core job dimensions (Hackman & Oldham, 1976, p.258).

Personal and Professional Characteristics of the Nurse - Characteristics include educational preparation, length of nursing experience in years, maturity in age, employment tenure, employment status, and area of practice.
Assumptions

1. Registration information from the Registered Nurses Association of British Columbia will accurately identify those nurses currently employed in critical care areas in British Columbia.

2. Subjects will provide frank and honest information to the study questions.

Limitations

1. Organizational philosophies and practices of the participating hospitals are not considered.

2. Subjects may not answer all of the questions on the questionnaires.

3. There are additional extraneous variables affecting job satisfaction, such as life situations, which are beyond the scope of the study and are therefore not addressed.

Significance of the Study

The significance of this study for the nursing profession is to provide some insight into job satisfaction of critical care nurses. Practical solutions to enhance job satisfaction may result when correlating job characteristics to job satisfaction. Using standardized measurement tools, various aspects of the job of critical care nursing are assessed. By studying job characteristics, identifying aspects of the working conditions which contribute towards
both job satisfaction and lack of satisfaction will help enhance nursing's knowledge base. This knowledge could be useful in augmenting work through redesign to allow for increase in job satisfaction. With increased job satisfaction, one may assume, according to the theory, that there would be an improvement in retention, recruitment, as well as increase the motivation of all critical care nurses.
Chapter Two

Literature Review

In order to understand job satisfaction in nursing, the main theories regarding job satisfaction will be explored. General job satisfaction will be discussed in order to ascertain how individuals in various occupational categories view their respective levels of job satisfaction. Finally, job satisfaction will be examined within the field of nursing to enable comparisons with different job classes as well as understand the significant job related factors specific to nursing. Much of the original work on the first two of these sections is from the 1940's through to the 1970's and provides the basis for current thinking in the field.

Theories of Job Satisfaction

Campbell, Dunnette, Lawler, and Weik (1970) divided theories of job satisfaction into two categories, content and process theories.

Content Theories

Content theories account for the needs, values or expectations which are important to individuals in influencing their job satisfaction (Gruneberg, 1979). Maslow's (1943) Needs Hierarchy Theory and its development
by Herzberg into the Two-Factor Theory of job satisfaction are the best known examples of this category.

Maslow (1954) outlined a theory of human motivation which has been applied to work motivation. Maslow postulated that man has five hierarchical need classes. In ascending order these needs are physiological, safety and security, social, esteem, and self-actualization. Only when lower order needs are satisfied, at least in part, will higher-level needs emerge.

In applying this theory to work, many organizations meet the physiological, safety and security, and social needs of employees through company policy and benefit packages. Therefore, they are no longer strong motivating forces. Needs such as recognition, status, and the opportunity for creative expression then become of greater importance (Wassenaar, 1974).

Herzberg, Mausner, and Snydermann (1959) developed the Two-Factor theory which identified components of job satisfaction and dissatisfaction. These phenomena represent two mutually exclusive domains, not existing as opposite ends of a bipolar continuum.

Essentially, Herzberg's two categories compressed the five level need hierarchy of Maslow (Munson & Heda, 1974). The motivators parallel Maslow's higher level needs, and the hygiene factors correspond to the lower level needs. Herzberg et al. (1959) postulate that since the hygiene
factors are related to basic needs they do not allow for psychological growth and therefore do not fulfil employee needs relevant to job satisfaction.

The motivators or intrinsic factors reflecting satisfaction include achievement, recognition, the work itself, responsibility, and advancements. The hygiene or extrinsic factors indicating dissatisfaction, reflect the environment. These include company policy and administration, supervision, salary, relationship with co-workers, and work conditions.

Process Theories

In contrast to the content theories, process theories specify the types of variables (needs, values, and expectations) causally relevant to work motivation, and explain how these variables combine to determine overall levels of job satisfaction (Locke, 1976). The expectancy, equity, and discrepancy theories are three of the most popular theories which fall into this category.

Vroom's (1964) work on expectancy involves indirect measurement of focusing on variables that are assumed to be outcomes of job satisfaction. He proposes that individual choices of work behaviour are related to the value they place on the accompanying work-related rewards. Vroom (1970) contends that people compare the level of reward they receive with what they expect to receive as a result of
their occupancy of a work role. Satisfaction occurs when the actual reward equals or exceeds expectations and is desired by the individual. However, if the reward is less than expected, or the person is indifferent to or experiences aversion to the outcome, dissatisfaction results. Negative worker attitudes result if the amount of a valued outcome is less than that received by a comparable other, or if the outcome is not valued.

While expectancy theory incorporates job characteristics, equity theory centres on personal and organizational variables. Adams (1963) proposes that a major influence on job performance and satisfaction exists in the degree of equity that people perceive in their job. A state of inequity exists when an individual perceives that the ratio of his job outcome to job inputs, in comparison with a reference person's outcomes to inputs, is unequal. In essence, the degree of job satisfaction is determined by the similarity between an individual's expectations and the rewards offered by the job. The theory stresses that excessive reward causes feelings of guilt, while low reward causes feelings of unfair treatment (Lawler, 1973).

Discrepancy theorists feel that satisfaction is "determined by the differences between the actual outcomes a person receives and some other outcome level" (Lawler, 1973, p.66). In one example of this type of theory, Locke (1969, p.316) believes that "job satisfaction and dissatisfaction
are a function of the perceived relationship between what
one wants from one's job and what one perceives it is
offering". Locke emphasizes that the perceived discrepancy,
not actual discrepancy, is the important feature determining
gratification.

In summary, there are two basic theoretical orientations
to the study of job satisfaction. The content theories
identify specific factors which can motivate employees. One
major criticism is that the importance of individual
differences in expectations is not addressed with regards to
satisfaction (Gruneberg, 1979). Process theories attempt to
explain the cognitive variables and how they relate to work
motivation. However, a criticism here is that the research
deals with job satisfaction as something static, not a
dynamic interaction between the individual and the
environment (Gruneberg, 1979). Whatever the approach
utilized, it appears that job satisfaction involves matching
individual needs to the job environment.

Job Satisfaction in Related Fields

The research on the determinants of job satisfaction has
looked primarily at two relationships. These relationships
are between satisfaction and the characteristics of the job,
or satisfaction and the characteristics of the person
(Lawler, 1973). The research shows that satisfaction is
related to both the person and the environment (Lawler,
Originally, much of the interest in the study of job satisfaction was motivated by the assumption that it influenced performance. However, Vroom (1964) showed that studies had not found a strong relationship between the two variables. At best, there was a very low positive relationship. Better job performers were only slightly more satisfied than poor performers.

Srivastva et al. (1975), performed an extensive literature review on job satisfaction and productivity, and the factors that influence these variables. The importance of intrinsic motivation, of autonomy in work settings, organizational climate, democratic and supportive supervisory style to job satisfaction was stressed.

There has been a demonstrated inverse relationship between satisfaction and turnover. There have been many comprehensive reviews documenting this relationship (Brayfield & Crockett, 1955; Mobley, Griffeth, Hand, & Meglino, 1979; Porter & Steers, 1973; Vroom, 1964).

In a multivariate analysis of age, education, job tenure, salary, job characteristics, and job satisfaction (Lee & Wilbur, 1985), it was found that job satisfaction increased with age. Younger employees were less satisfied overall with their jobs while older employees were more satisfied with the extrinsic characteristics of the work. Age has been shown to be related to job satisfaction in other
studies as well (Gibson & Klein, 1970; Herzberg, Mausner, Peterson & Capwell, 1957; Hulin & Smith, 1965; Rhodes, 1983).

Job Satisfaction in Nursing

Job satisfaction of nurses has been studied for some time. Godfrey (1978) surveyed 17,000 nurses in Canada and the United States. Responses indicated that job satisfaction was associated with opportunities for professional growth such as challenging work, the authority to carry out that work, recognition and feedback, and administrative support. Other studies showed similar findings in nursing staff (McCloskey, 1974; Larson, Lee, Brown, & Shorr, 1984). In a survey of 3,500 nurses, Huey and Hartley (1988) identified competent registered nursing staff and authority to exercise nursing judgement in patient care was associated with job satisfaction. In a review of the relevant literature, Jenny (1982) found that general categories contributing to job satisfaction were personnel policies, organizational climate, and nursing roles and functions.

Roedel and Nystrom (1988) compared job satisfaction with job characteristics as measured by the Job Diagnostic Survey (Hackman & Oldham, 1980) in 135 registered nurses. When comparing nurses' scores for job characteristics with the normative data collected by Oldham, Hackman, and Stepina
(1976) they found the study nurses reported significantly higher skill variety and task significance, but lower task identity. Further, the ranking of both the study and normative group from highest to lowest was satisfaction with coworkers, supervision, the work itself, pay, and promotional opportunities.

Walker (1989) conducted a correlational study, using the Job Diagnostic Survey (Hackman & Oldham, 1980), on a sample of 96 full time nurses in acute care hospitals in British Columbia. While the sample size was small for the number of variables, results indicated the nurses perceived their jobs rich in task significance, dealing with others, and skill variety. They felt the job was poor in task identity and autonomy. The nurses in the study were less satisfied with the general satisfaction, autonomy, and motivating potential of their job when compared to other professionals.

Studies focusing on job dissatisfaction have also been conducted. Benton and White (1972) surveyed 565 nurses who found the highest ranked job deficiencies to be lack of pay differential for experience, inadequate personnel per shift, and lack of in-service training programs. Larson, et al. (1984) found factors related to employment issues such as salary and staffing, as least satisfying. Wandelt, Pierce, & Widdowson (1981) surveyed 3,500 Texas nurses to identify factors associated with nurse unemployment. A rank-order of the top 10 factors leading to dissatisfaction included
inadequate salaries, paperwork, inadequate administrative support, and insufficient opportunity for continuing education. Finally, Prescott and Bowen (1987) studied job reactions and employment behaviours in over 1,000 staff nurses. Rank ordering of the results found inflexible scheduling and insufficient administrative support as the most frequent reasons cited for terminating employment. The primary reasons for staying were a feeling of belongingness within the organization and supportive relationships with administrators and coworkers.

The Canadian Nurses Association/Canadian Hospital Association (1990) compiled a review of 23 studies of nurse retention and quality of work life reports from across Canada. They found that the factors important in retention were: 1) work environment issues such as staffing, workload structure, non-nursing functions, scheduling, staff orientations, internships, and preceptorships; 2) education in the use of technology, clinical and technical expertise, career opportunities; and 3) compensation in pay and benefits.

Researchers have compared job satisfaction within nursing to that of other professionals. Wright, McGill, and Collins (1990) compared a group of nurses with elementary school teachers and accountants, and found the three groups rated many aspects of their jobs similarly. However, nurses reported lower levels of satisfaction in salary and
opportunity for administrative participation when compared with accountants, and lower levels of satisfaction with job security when compared with teachers.

Many studies found no significant correlation between personal and professional characteristics of the nurse and job satisfaction (Sanger, Richardson, & Larson, 1985; Simpson, 1985). However, some studies have found significant results. A survey of more than 2500 B.C. registered nurses found a direct and indirect relationship between the levels of job satisfaction and dissatisfaction to three types of educational preparation (Registered Nurses Association of British Columbia, 1988a). The mixed findings suggest that there may be unexplored variables that must be assessed when comparing satisfaction with educational preparation. A variable such as job expectations could affect how baccalaureate educated nurses view a job as compared to diploma educated nurses.

Seybolt (1986) surveyed levels of job satisfaction using the Job Diagnostic Survey (Hackman & Oldham, 1980) and compared 647 staff nurses according to length of tenure. He found that different job design variables were important to job satisfaction when comparing length of tenure. In new entrants (less than 6 months) the critical factor to job satisfaction was feedback. Early career nurses (6 months to 1 year) found performance-outcome links important. Mid-career nurses (1 to 3 years) indicated that autonomy and
role clarity were crucial. Advanced career nurses (3 to 6 years) chose task significance and job feedback as critical factors, while later career nurses (over 6 years) desired supervisory feedback and role agreement. Turnover intentions were highest for the early career nurses decreasing with tenure, the exception being the entry level nurse, whose turnover intentions were second lowest.

Wetzel, Soloshy, and Gallagher (1990) studied the work attitudes of full time and part time registered nurses. They found there was no significant difference in the two groups when measuring extrinsic or intrinsic job satisfactions. The only differences found between the two groups were the full time nurses worked a greater number of hours and claimed to have more job involvement.

The relationship between job satisfaction and turnover has been documented (Mobley et al., 1978; Redfern, 1980). Further, the relationship between absenteeism and satisfaction has been studied and confirmed within nursing. Myrtle and Robertson (1979) found that a high absenteeism rate within a nursing unit is related to deficiencies in either the organizational climate, the work team, or the work content.

Within the literature regarding critical care nurses, little was found regarding job satisfaction alone. Many studies have found that both critical care and general staff nurses demonstrate low to moderate job satisfaction, with no
difference between the two groups (Nichols, Springford, & Searle, 1981; Williams, 1990).

In contrast to the above studies, Joiner, Johnson, Chapman, and Corkrean (1982) found that there were differences in aspects of job satisfaction when comparing critical care with ward nurses. The study looked at motivating potentials of nurses as measured by Hackman & Oldham (1980). The motivating potential score for the study group was higher than all other job categories reported by Hackman and Oldham. Overall, these nurses found their jobs high in task significance and low in task identity when compared to other professional jobs. This study went on further to study different groups of nurses including coronary care as well as many types of wards. The coronary care nurses showed the highest motivating potential score. This was attributed to the high degree of task significance and autonomy reported by this subgroup of nurses.

Dear, Weisman, Alexander, and Chase (1982) utilized the Job Descriptive Index to compare job satisfaction and turnover between intensive care nurses and ward nurses. Results from the study suggest that it is not the intensive care work per se that influences job satisfaction and turnover, but rather the personal factors of nurses and the organizational climate of the institution. A survey of 567 critical care nurses revealed that 62% of the staff nurse respondents had considered leaving critical care nursing
because of high levels of job dissatisfaction (Alspach, 1987). The job dissatisfaction was due to stress, understaffing, work schedules, and low salary.

Volk and Lucas (1991) studied the relationship of management style and anticipated turnover. The findings from this study indicated that as nurses experienced participative management style, they were less likely to anticipate leaving their critical care positions.

Professional characteristics may play a role in job satisfaction within the realm of critical care as well. In a study of critical care nurse preceptors, Bizek and Oermann (1990) found differences in job satisfaction related to the type of unit in which the nurse worked, with emergency and intermediate care employees being more satisfied than intensive care employees. Job satisfaction was inversely related to tenure, and positively related to institutional support for all nurses.

Summary

In this chapter, pertinent literature to job satisfaction has been reviewed. Initially, the two main schools of theories were discussed. Then general literature regarding job satisfaction was surveyed. Finally, literature on job satisfaction within the field of nursing was examined.

The factors contributing to job satisfaction or dissatisfaction appear to be diverse. When comparing and
combining themes within nursing, components frequently associated with job satisfaction include those which promote professional growth such as autonomy, recognition feedback, and supportive management. The components frequently associated with job dissatisfaction include those relating to the work environment such as inflexible scheduling, pay, interprofessional relationships, and poor administrative support.

Personal and professional factors contributing to job satisfaction are still in the formative stages. The majority of studies have failed to identify a relationship between these factors and job satisfaction. However, correlations between nursing experience and employment tenure with job satisfaction have been significant.

Based on the literature review, the use of the Job Characteristics Model (Hackman & Oldham, 1980) may assist in the examination of job satisfaction in critical care nurses. The conceptual model looks at job satisfaction through the relationship of the person and job, and the significant variables leading to general job satisfaction. Through the use of the Job Diagnostic Survey (Hackman & Oldham, 1980), these significant variables can be measured and correlated with general job satisfaction (Brayfield & Rothe, 1951). The resulting information could be useful to administration in designing critical care nursing jobs to enhance job satisfaction.
Chapter Three

Methods

This chapter includes a description of the research methods used and the specific procedures followed in the study.

Research Design

This descriptive correlational design used three structured questionnaires for this study.

Subject Sample

A simple random sample of 300 subjects from the target population of 3,469 critical care nurses in British Columbia (Health Human Resources Unit, 1990) was used for the study. A list of registered nurses who fit the selection criteria was produced by the Registered Nurses Association of British Columbia. The sample size was determined by the number of variables to be studied. In this study, the six variables of motivating potential (a combination of the five core job dimensions), experienced meaningfulness of the work, experienced responsibility for outcomes of the work, knowledge of the actual results of work activities, general job satisfaction, and context job satisfactions were addressed. Therefore, using Tabachnick and Fidell's (1983) rule of thumb of 20 participants per variable studied, 120
participants were needed. Assuming a return rate of approximately 40 percent and that several respondents who no longer met the inclusion criteria would have to be removed, a mail out size was determined to be 300 subjects.

Subject Selection Criteria

Nurses who are:
1. currently registered with the Registered Nurses Association of British Columbia (RNABC); and
2. currently employed in critical care units within hospitals in British Columbia.

Data Collection Procedure

The questionnaires, subject information sheet, introduction letter, and postage paid return envelope were mailed to each selected subject. These packages were mailed from the RNABC in order to maintain anonymity, with the return mail sent to the researcher. While it was intended that reminder cards would be sent to those subjects who had yet to return their questionnaires, the number of returns made this step unnecessary.

Instruments

Three instruments were mailed to the subject sample. These included the Job Diagnostic Survey (Hackman & Oldham, 1980; Appendix A), the Index of Job Satisfaction (Brayfield
& Rothe, 1951; Appendix B), and the Nurse Characteristics Questionnaire developed by the researcher (Appendix C).

**The Job Diagnostic Survey**

The Job Diagnostic Survey (JDS) was used to measure the following variables: motivating potential; critical psychological states, which include experienced meaningfulness of the work, experienced responsibility for outcomes of the work, and knowledge of the actual results of work activities; and context job satisfactions. Although variables consist of only five of the 19 variables in the JDS, the instrument will be described in its entirety.

The JDS is a data collection tool comprised of 83 items using a Likert-type 7-point scale from low to high. The JDS provides measures of variables relating to: a) core job dimensions (combined to form motivating potential); b) critical psychological states resulting from these dimensions; c) personal and work outcomes of employees to the job and work setting; d) employee growth need strength; e) context job satisfactions.

The JDS was developed over a two year period which involved testing and revision. Empirical testing involved application with over 1500 individuals working in more than 100 jobs in approximately 15 organizations. The scales have internal consistency reliabilities that range from a high of .88 (growth need strength) to a low of .58 (task identity
and dealing with others). The results suggest that the internal consistency reliability and discriminant validity of the items are satisfactory (Hackman & Oldham, 1975). Further testing involved 6930 subjects in 876 jobs from 56 organizations which resulted in similar reports regarding the instrument. Normative data for several job families were also developed using the JDS (Oldham, Hackman, & Stepina, 1979). Subsequent meta-analysis of the relation of job characteristics to job satisfaction showed a correlation between job characteristics and satisfaction to be .68 for persons who are high on Growth Need Strength (GNS), and .38 for those low on GNS (Loher & Noe, 1985).

There are several cautions noted by Hackman and Oldham (1980). The job characteristics are not independent of one another. The validity of some JDS scales remain unestablished. The context satisfactions have few items and are meant only as a check of satisfaction in selected aspects of the work environment. The evidence of validity of the growth need strength subscale is scattered and inconsistent.

**Index of Job Satisfaction**

The second instrument used in this study to measure general job satisfaction was the Index of Job Satisfaction (IJS, Brayfield & Rothe, 1951). The decision to use the IJS to assess this variable was made due to the limited number
of items assessing general job satisfaction in the JDS. While the JDS does assess general job satisfaction, there are only five items assessing this variable, two which discuss quitting. The IJS is an 18 item questionnaire which utilizes a 7-point Likert-type scale from low of 1 to a high of 7. The score is calculated by summing the ratings from the 18 items.

The construction of the IJS scale consisted of refining job satisfaction items developed by a group of students. Testing and retesting of the statements were then performed on two groups of workers. Finally, the IJS was administered to a total of 322 employees at two separate times (Brayfield & Rothe, 1951).

The reliability of the scale was computed by using the odd-even product moment reliability coefficient (.77), when corrected by Spearman-Brown was .87. The validity of the items were assessed by "face value" of 77 judges. A comparison was made between the mean scores of a group of "satisfied" and "unsatisfied" students. Using the Fisher and Behrens' d-test, the difference between the means was found to be significant. Finally, the IJS was compared to the job satisfaction index developed by Hoppock in the early 1930's. The product-moment correlation between scores on the Hoppock questionnaire and on the IJS was .92.

For the purpose of analyzing the findings from present study, since Brayfield and Rothe (1951) did not discuss the
reverse coding of items a Principle Components Analysis with Varimax Rotation was performed on all 18 items. The majority of the items loaded on the first factor either negatively or positively. Three items, numbers 40, 48, and 49, loaded on another factor and were excluded. A further item, number 55, appeared on all factors and was likewise excluded. Of the revised scale, an alpha coefficient of 0.82 was determined (see Appendix E).

Nurse Characteristics Questionnaire

The third tool, the Nurse Characteristics Questionnaire (Appendix C) was developed by the researcher. This subject information sheet included information on educational preparation, length of nursing experience in years, employment tenure, employment status, maturity in age, and area of clinical practice. Upon the return of the questionnaires it was noted that the "other" category was frequently used in area of practice section. To more accurately reflect the respondents information for the purpose of analysis, the groupings were changed to Medical/Surgical Intensive Care Unit, Coronary Care Unit, Intensive Care/Coronary Care Combined Unit, Emergency, and other.

Data Analysis

Data were analyzed using the computer program SYSTAT/PC
Version 5.1. Descriptive statistics included means and standard deviations of all variables; percentages were also obtained for the nurse characteristics.

Pearson product moment correlations were performed to determine the magnitude and direction of the relationships of the six main variables including general job satisfaction, the critical psychological states (experienced meaningfulness of the work, experienced responsibilities for outcomes of the work, knowledge of the actual results of the work activities), motivating potential, and context satisfactions. Multiple regression was used to determine the extent, direction and strength of relationship between these five key variables (predictors) and general job satisfaction (dependent). The level of significance was set at alpha = 0.05 for all tests.

Finally, statistical tests were used to determine whether the nurse characteristics were correlated with general job satisfaction. Pearson product moment correlations were performed on maturity, years of nursing experience, and general job satisfaction. Analysis of covariance using years of nursing experience as the covariate, was used to assess whether general job satisfaction differed depending on education preparation, employment tenure, area of practice, or employment status. Nursing experience was used as a covariate because general job satisfaction and nursing experience showed a significant
positive relationship.

**Protection of Human Rights**

Protection of human rights was addressed in several ways. The proposal received approval from the University of British Columbia Behavioural Sciences Screening Committee for Research and Other Studies Involving Human Subjects. Second, the RNABC produced the randomized sample, issued a code number to ensure subjects' anonymity, and mailed out the survey packages. Third, subjects were assured that they were under no obligation to participate through the use of an information letter. Subjects were also assured of the voluntary nature of their participation, the confidentiality of their responses, the importance of their participation in the study, as well as ability to access further information (Appendix D).

**Summary**

This descriptive survey used a correlational research design. The instruments used included the Job Diagnostic Survey (Hackman & Oldham, 1980), the Index of Job Satisfaction (Brayfield & Rothe, 1951), and the Nurse Characteristics Questionnaire. Data analysis of the 127 usable questionnaires included descriptive statistics, Pearson product moment correlations, multiple regression, and ANOCOVAs.
Chapter Four

Results and Discussion

The results of this study are presented in the following four sections. The first section presents a description of the sample of critical care nurses. The second section presents the findings which answer the research questions. The third section compares the study data to other nursing research in the literature. The final section compares the study data to normative data provided by Hackman and Oldham (1980).

Description of the Sample

A total of 300 survey packages were mailed to currently employed critical care nurses within British Columbia. A total of 134 (44.7%) of the packages were returned, of which seven were excluded; one of the excluded packages was not filled out, the other six did not meet inclusion criteria. A total of 127 (42.3%) questionnaires were used in the analysis.

Nurse Characteristics

Data were collected on the nurse characteristics of educational preparation, years of nursing experience, maturity, employment tenure, area of practice, and employment status.
Educational Preparation

The predominant educational preparation (40.9%) was a diploma in nursing and one or more post-basic courses. The second most representative subgroup was a diploma education exclusively (24.4%). Nurses with a baccalaureate degree post-diploma certification consisted of 9.4% of the sample. The nurses with diploma education and some university courses towards a degree also consisted of 9.4% of the sample. Nurses with generic baccalaureate education included 6.3% of the sample. Finally, the "other" subgroup included 9.4% of the nurses who did not fit in the above categories. The majority of this group included nurses with a diploma education and both post-basic and university courses, or with baccalaureate education and post-basic courses.

The educational profile for this sample is somewhat different from nurses in Canada and British Columbia (Statistics Canada, 1990a). The category breakdown listed by Statistics Canada includes diploma education, diploma education plus post-basic course certification, baccalaureate degree, master degree, or higher. When comparing the study group to national and provincial nurses, the study group's educational level is much higher. Of the study group, 40.9% had completed post-basic course work as compared to 15.8% of Canadian hospital general duty nurses, and 33.8% for British Columbia. Only 33.8% of the study
population had a diploma certification as their highest level of education (combining the categories of diploma education and diploma plus university course work) as compared to 75.2% for Canada and 57.9% for B.C. Finally, the percentage of baccalaureate prepared nurses was also higher for the study group (15.7%) as compared to national (8.8%) and provincial (8.3%) statistics. Results are presented on Figure 3.

There are a few possible explanations for the discrepancy in level of education. Since the study group consists of nurses in critical care areas, it is possible that a higher percentage of this group would be motivated to attend post-basic courses as a prerequisite or corequisite of employment. An alternate reason is that most of the post-basic courses offered are within the critical care areas. The statistics used by Statistics Canada (1990a) include all practising hospital employed general duty nurses.

There are slightly different categories of education in the Statistics Canada information. According to Statistics Canada (1990a) only successfully completed post-basic courses carrying a certificate or diploma are considered in the "diploma and post-basic courses" category. In the study group, nurses with partial completion of post-basic course work were included.
Figure 3 – Educational Profiles of Nurses in Three Categories
Years of Nursing Experience

Nurses were asked to report the total number of years of nursing employment. The nurses of this group showed a range from two to 38 years, with a mean of 13 years, a median of 12 years, and a standard deviation of 7.7 years.

Maturity

The age range of nurses was from 24 to 63 years. The mean was 37 years, the median was 35 years, and the standard deviation was 8.4 years.

The results for the respondents showed a different age range of nurses when compared to national and provincial figures. The study sample was generally younger in age. Statistics Canada (1990b) reported that 18.6% of nurses employed in Canada were below age 30, 52.3% between the ages of 30 and 44, and 19.9% over the age of 44. In British Columbia similar figures hold true; 15.1% of the nurses were below the age of 30, 51.5% between the ages of 30 and 44, and 33.3% above the age of 44. However, in the study group 22% of the sample was below the age of 30, 63.8% in the 30 to 44 year age group, and 14.2% above the age of 44. This indicates that the nurses in the study were younger, on average, than either the provincial or Canadian statistics. See Figure 4 for a comparison of results.
Figure 4 - Age Distribution of Nurses in Three Categories


Employment Tenure

Following Seybolt's (1986) categories, employment tenure was grouped into five time periods: less than 6 months, from 6 months to 1 year, from 1 to 3 years, from 3 to 6 years, and over 6 years. The most represented group was nurses with more than 6 years of tenure (37%). The second most frequently cited category was nurses with 1 to 3 years tenure (30.7%). This was followed closely by the group with 3 to 6 years tenure (26%). The lowest represented groups included those nurses with 6 months to 1 year (4.7%) and less than 6 months (1.6%) respectively.

The low number of respondents for the categories of less than 6 months and 6 months to 1 year may be that the information gathered by the Registered Nurses Association of British Columbia (RNABC) which was used to obtain the randomized sample is updated on an annual basis at the beginning of each year. Since this study was conducted in October, the data were eight months old. Therefore, it was likely a coincidence that there were any respondents in the less than 6 months category. Furthermore, the category of six months to one year encompasses a much smaller time frame when compared to the remaining categories, indicating a lesser chance of respondents in the randomized sample.
Area of Practice

The majority of nurses in this sample group (34.6%) practised in an Intensive Care Unit, including nurses working in various types of Medical and/or Surgical Intensive Care Units. The second highest group included nurses from the Emergency Unit (23.6%). Intensive Care/Coronary Care Combined Units included 17.3% of the sample. The nurses working in Coronary Care Units consisted of 11.8% of the sample. Finally, 12.6% of the sample included nurses who did not fit into the above categories. Examples of this group included nurses who worked in Post Anaesthetic Rooms or in multiple settings.

Employment Status

The largest percentage of respondents (49.6%) included nurses who were employed on a full time basis. The second largest group worked in a permanent part time position (35.4%). The casually employed nurses constituted 13.4% of the group. The "other" category (1.6%) included nurses employed but currently on a leave of absence.

The respondents' employment status resembles both the national and provincial trends. Statistics Canada (1990b) documented the percentage of hospital employed nurses by the categories of full time, part time, and not stated. Nationally, full time nurses contribute 58.1% of the hours worked, part time nurses contribute 33.2% of the hours
worked. In British Columbia, full time nurses included 57.6% of the total, part time nurses 31.5% of the group. When nurses in the study groups "casual" categories were divided amongst the full time and part time nurses, the breakdown was more consistent with the national and provincial statistics. Changing the respondents' categories to correspond with those described in Statistics Canada (1990b), full time nurses included 54.3% of the total sample, part time nurses constituted 44.1% of the total. Results are presented in Figure 5.
Figure 5 - Employment Status of Nurses in Three Categories
Research Questions

Research Question #1

What is the level of general job satisfaction in critical care nurses?

In the revised Index of Job Satisfaction scale, the minimum possible satisfaction score is 14, and the maximum score possible is 98. The mean general job satisfaction score obtained by this sample was 68.11, with a standard deviation of 10.59. Dividing the sample mean by the number of items, the overall item mean was 4.87 out of a possible score of 7. The results suggest that the general job satisfaction of this sample of critical care nurses is above the median of 4 on the 7 point scale.

Since the impetus for this study was the perceived lack of job satisfaction in the nursing literature and the high vacancy rates, it is interesting that the study nurses are above the median in general job satisfaction scores. The majority of nurses in this sample had over 6 years of tenure. Seybolt (1986) considers this group of nurses the pillars of the organization, and turnover is less likely than at any other tenure time. Possibly, nurses with low general job satisfaction would have already found employment elsewhere.
Research Question #2

What is the relationship between general job satisfaction and the following variables: motivating potential, critical psychological states, and context job satisfactions?

Motivating Potential

The mean scores of the five core job dimensions which make up the motivating potential vary from a mean high of 6.03 to a mean low of 4.34 (Table 1). Task significance showed the highest mean score, which indicated the nurses questioned felt that their work was very important and had substantial impact on the lives of others. The second highest mean score was skill variety (5.79). This showed that critical care nurses perceived their job as rich in the assortment of skills within the job. The next highest mean score was autonomy (5.19), showing that nurses also felt their job provided substantial freedom and independence.

The lowest mean score was in the area of task identity (4.34) suggesting that the critical care nurses felt they had least satisfaction in breaking down their tasks into identifiable pieces with a visible outcome.

The motivating potential of the study group was calculated by a formula combining the core job dimensions (Figure 2). The mean score was 139, the standard deviation 53.46. This score corresponds to 5.18 on the 7-point scale
used to measure all of the other variables.

Table 1
Means and Standard Deviations of Core Job Dimensions

<table>
<thead>
<tr>
<th></th>
<th>N=127</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skill Variety</td>
<td></td>
<td>5.79</td>
<td>0.84</td>
</tr>
<tr>
<td>Task Identity</td>
<td></td>
<td>4.34</td>
<td>1.14</td>
</tr>
<tr>
<td>Task Significance</td>
<td></td>
<td>6.03</td>
<td>0.86</td>
</tr>
<tr>
<td>Feedback from Job</td>
<td></td>
<td>4.87</td>
<td>1.03</td>
</tr>
<tr>
<td>Autonomy</td>
<td></td>
<td>5.16</td>
<td>1.07</td>
</tr>
<tr>
<td>Motivating Potential</td>
<td></td>
<td>139.00</td>
<td>53.46</td>
</tr>
</tbody>
</table>

Note: Rating scale ranges from 1 = low to 7 = high
In the case of Motivating Potential the lowest possible score is 1, the highest is 343.

Critical Psychological States

The three critical psychological states of experienced meaningfulness of the work, experienced responsibility for the outcomes of the work, and knowledge of the actual results of work activities were all seen as important in the critical care nurse's role (Table 2). The highest mean score was in experienced meaningfulness of the work (5.86), which indicated that the nurses found their job important, valuable, and worthwhile. According to Hackman and Oldham (1980), the precursors to experienced meaningfulness of the
work are skill variety, task identity, and task significance. When people engage in activities that challenge or stretch their skills and abilities, they will experience the task as meaningful, and the more skills involved, the more meaningful the work is likely to be (Hackman & Oldham, 1980). Likewise, when workers understand that the work being done will have a substantial impact on the physical or psychological well-being of other people, it will be seen as meaningful. Clearly, when looking at the results, nurses feel this way about the work of nursing.

Table 2
Means and Standard Deviations of Critical Psychological States

<table>
<thead>
<tr>
<th></th>
<th>N = 127</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meaningfulness of Work</td>
<td></td>
<td>5.86</td>
<td>0.75</td>
</tr>
<tr>
<td>Responsibility for Outcomes of Work</td>
<td></td>
<td>5.67</td>
<td>0.77</td>
</tr>
<tr>
<td>Knowledge of Results of Work Activities</td>
<td></td>
<td>5.21</td>
<td>0.91</td>
</tr>
</tbody>
</table>

Note: Rating scale ranges from 1 = low to 7 = high.
Context Satisfactions

How satisfied workers are with the work context may affect their willingness or ability to take advantage of the opportunities for personal accomplishment provided by enriched work (Hackman & Oldham, 1980). The context satisfactions measured in this study included job security, pay, coworkers, and supervision. The highest mean score (5.61) was satisfaction with coworkers (Table 3). This indicates that the study nurses were appreciated by their coworkers as people and as health care providers when assessing the specific questionnaire items. This may impact the satisfaction with the job as a whole, because some of their interpersonal needs are being met. Since nursing, particularly critical care nursing, involves many nurses caring for a relatively small number of patients, pleasant collegial relationships are very important to the giving and receiving of help.

The lowest mean score in the entire study was in the area of pay and fringe benefits (3.75). This indicates the nurses were least satisfied with the compensation aspect of their job. Pay was seen as the least satisfying aspect of all the variables tested within the work of nursing. If not feeling appropriately compensated, the critical care nurses would be less willing to take advantage of the opportunities within the job.
Table 3
Means and Standard Deviations of Context Satisfactions

<table>
<thead>
<tr>
<th>N = 127</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pay</td>
<td>3.75</td>
<td>1.52</td>
</tr>
<tr>
<td>Security</td>
<td>4.97</td>
<td>1.59</td>
</tr>
<tr>
<td>Co-workers</td>
<td>5.61</td>
<td>0.94</td>
</tr>
<tr>
<td>Supervision</td>
<td>4.68</td>
<td>1.39</td>
</tr>
<tr>
<td>Context Satisfactions</td>
<td>4.83</td>
<td>0.95</td>
</tr>
</tbody>
</table>

Note: Rating scale ranges from 1 = low to 7 = high.

Pearson Product Moment Correlations

Pearson product moment correlations were performed on the six main study variables including motivating potential, the psychological states (experienced meaningfulness of the work, experienced responsibility for outcomes of the work, and knowledge of the actual results of the work activities), context satisfactions, and general job satisfaction (Table 4). General job satisfaction correlated most strongly with experienced meaningfulness of the work, context job satisfaction, and motivating potential. This suggests that when nurses experience meaningfulness in their work, are satisfied with the context satisfactions of pay, job security, coworkers, and supervision; and are internally
motivated with skill variety, task significance, and task identity, they are also more satisfied in their work. Further, nurses who feel their jobs have characteristics which are high in motivating potential, also seem to know their performance level within the job itself. Finally, with experienced meaning in the work of nursing, there coexists an inherent responsibility for the outcomes of that work.

The weakest relationship was between experienced responsibility for the outcomes of the work and the motivating potential. This suggests the internal motivating potential of the core job characteristics have little effect on personal feelings of accountability for the job.
Table 4
Pearson Product Moment Correlation Matrix

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motivating</td>
<td>1.000</td>
<td>0.375**</td>
<td>0.267*</td>
<td>0.471**</td>
<td>0.331**</td>
<td>0.419**</td>
</tr>
<tr>
<td>Potential</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meaningfulness</td>
<td>1.000</td>
<td>0.465**</td>
<td>0.314**</td>
<td>0.347*</td>
<td>0.514**</td>
<td></td>
</tr>
<tr>
<td>of the Work</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Responsibility</td>
<td>1.000</td>
<td>0.292**</td>
<td>0.272*</td>
<td>0.333**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>of the Work</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Knowledge of</td>
<td>1.000</td>
<td>0.335**</td>
<td>0.287**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>the Results</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Context</td>
<td>1.000</td>
<td>0.458**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Satisfactions</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>General Job</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Satisfaction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p < .01
**p < .001

Multiple Regression Analysis

A multiple regression analysis was performed to determine which independent variables predicted general job satisfaction (Table 5). This approach examined the ability of each independent variable to account for its unique contribution in predicting general job satisfaction after all of the other independent variables had been partialled out of the equation. In this study, the strongest predictor of general job satisfaction was the experienced
meaningfulness of the work. Motivating potential and context satisfactions were also found to predict general job satisfaction. In total, 36% of the variance of general job satisfaction could be explained by the five independent variables.

Table 5

Multiple Regression Analysis
Predicting General Job Satisfaction

<table>
<thead>
<tr>
<th>Variable</th>
<th>DF</th>
<th>T</th>
<th>P (2 tail)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motivating Potential</td>
<td>5</td>
<td>2.371</td>
<td>0.019*</td>
</tr>
<tr>
<td>Meaningfulness of the Work</td>
<td>5</td>
<td>3.755</td>
<td>0.000**</td>
</tr>
<tr>
<td>Responsibility of the Work</td>
<td>5</td>
<td>0.746</td>
<td>0.457</td>
</tr>
<tr>
<td>Knowledge of the Results</td>
<td>5</td>
<td>-0.200</td>
<td>0.842</td>
</tr>
<tr>
<td>Context Satisfactions</td>
<td>5</td>
<td>3.378</td>
<td>0.001**</td>
</tr>
</tbody>
</table>

Adjusted Squared Multiple R = 0.363

*p < .01
**p < .001
Research Question #3

What is the relationship between personal and professional characteristics of critical care nurses and general job satisfaction?

Preliminary analysis was conducted on the nurse characteristics to determine whether any significant correlations with general job satisfaction could be found. Pearson product moment correlations were performed between general job satisfaction, nursing experience, and age (Table 6). Tabachnick and Fidell (1983) state that if a bivariate correlation is above .90 it suggests multicollinearity, and one of the two redundant variables must be deleted. Since the relationship between age and nursing experience was at .89 it was judged to suggest multicollinearity. Since nursing experience was more strongly related to general job satisfaction, age was discarded. Experienced nurses likely have a greater knowledge base to work from, they may perceive greater job satisfaction because they understand the meaningfulness of their actions. Also, they may have a greater understanding of management concepts to rationalize the functioning of the unit.

Analysis of covariance using years of nursing experience as the covariate, was performed on educational preparation, nursing tenure, area of practice, and employment status to ascertain whether job satisfaction
differed according to these nurse characteristics. No significant differences were seen. Sample sizes, means, and standard deviations of the nurses characteristics are listed in Appendix F.

Table 6
Pearson Product Moment Correlation Matrix of General Job Satisfaction, Nurse Experience, and Age

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Job Satisfaction</td>
<td>1.000</td>
<td>0.228**</td>
<td>0.227**</td>
</tr>
<tr>
<td>Nurse Experience</td>
<td></td>
<td>1.000</td>
<td>0.887***</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td>1.000</td>
</tr>
</tbody>
</table>

**p = .01
***p = .00 (multicollinearity)

Comparison of Study Sample with Other Studies

The results of the present study support findings from other studies measuring job characteristics within groups of staff nurses. In this survey, the highest mean scores of core job characteristics were found in the measures of task significance and skill variety, the lowest in task identity. Joiner, Johnson, Chapman, and Corkrean (1982) reported that the staff nurses in their study showed highest scores in skill variety and task significance and lowest scores in task identity. When comparing the type of nursing assignment within their sample, Joiner et al. (1982) found
that the coronary care nurses had higher levels of autonomy when compared to ward nurses. Similarly, Roedel and Nystrom (1988) and Walker (1990) found that their group of staff nurses had the highest mean scores in skill variety and task significance, and the lowest mean score in task identity. When compared to nursing studies reported in the literature, the results from the present study found that these critical care nurses had the second lowest overall mean motivating potential score (139). Joiner et al. (1982) showed an overall motivating potential mean of 155; the highest mean score of 188 was found in the critical care group, the lowest being psychiatry nurses with a mean of 129. Roedel and Nystrom's (1988) study group of staff nurses showed a motivating potential mean score of 163. Walker (1990) found the staff nurses' motivating potential to have a mean of 129.

It was interesting that all the nursing studies found task significance and skill variety to have the highest scores, task identity the lowest as well. This finding was consistent, regardless of which area the nurses worked in. Therefore, it seems that nurses in all areas of practice feel their work is important in effecting the well-being of others, and have a number of complex or high-level skills. These are crucial elements to the job of nursing per se, not to the area of practice chosen to be employed in.

Nurses also uniformly had low scores in task identity.
The ability to see a task done from beginning to end was not possible. Likewise, the nurse's job was seen as contributing only a part in the overall service. With factors such as lengthy hospital stays of patients, multidisciplinary teams caring for patients, shift work, extended days off, one can see why the nurses are less satisfied in this area. If the task is defined as the overall improvement of the patient, not specific procedures such as bed baths or dressing changes, one can see how nurses would feel this way.

There is an indication that critical care nurses have higher levels of satisfaction with autonomy than ward nurses. Autonomy in the job is seen as providing substantial freedom, independence, and discretion in scheduling the work, and in determining the procedures to be used in carrying it out (Hackman & Oldham, 1980). A difference in feelings of autonomy may be due to the fact that critical care nurses have more standing orders, have a lower patient-nurse ratios, and therefore feel empowered to be more of an advocate for the patient and family.

Comparison of Study Sample with Normative Sample

A comparison of sample means with the normative data provided by Oldham, Hackman, and Stepina (1979) was also performed. Since other nursing studies in the literature compared findings with the normative sample, it was felt
that comparison with the present study would give consistency. The normative sample comprise the result of surveys of nearly 7000 respondents in over 800 jobs in 56 organizations.

The job classification of professional/technical was chosen as the most representative of the nursing profession. Examples of other occupational titles found in this classification included engineers, physicians, and lawyers. However, notes of caution when comparing these data must be stated for several reasons. While the job classification of professional/technical seems to be most closely related to nursing in the choices offered, we do not know whether nurses were included in the study or not. Also, the sample size of the group was quite small (n = 72). Thirdly, the findings are quite dated, the data were gathered sometime before 1979. Finally, we do not have a breakdown of gender therefore it is possible that the majority of respondents were male, while in the nursing studies the majority of respondents were female.

While task significance and skill variety were seen as significantly higher in importance in the study group when compared with the normative group, the study group was significantly less able to identify tasks (Table 7). These findings are consistent with those of Walker (1990) who also found the staff nurses showed significantly higher scores in skill variety and task significance, and significantly lower
Table 7
Comparisons of the Study Samples and the Normative Group (Hackman & Oldham, 1980)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>t-value</td>
<td>z-score</td>
<td>t-value</td>
</tr>
</tbody>
</table>

Core Job Dimensions

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Normative</th>
<th>Normative</th>
<th>Normative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skill Variety</td>
<td>3.27*</td>
<td>1.75*</td>
<td>4.28*</td>
</tr>
<tr>
<td>Task Identity</td>
<td>-4.30**</td>
<td>-4.34*</td>
<td>-3.31*</td>
</tr>
<tr>
<td>Task Signif</td>
<td>3.15*</td>
<td>4.32*</td>
<td>6.50*</td>
</tr>
<tr>
<td>Feedback</td>
<td>-1.36</td>
<td>-0.60*</td>
<td>0.45</td>
</tr>
<tr>
<td>Autonomy</td>
<td>-1.23</td>
<td>-3.96*</td>
<td>1.38</td>
</tr>
<tr>
<td>Motivating Potential</td>
<td>-1.90</td>
<td>-2.81*</td>
<td>1.15</td>
</tr>
</tbody>
</table>

Critical Psychological States

<table>
<thead>
<tr>
<th>State</th>
<th>Normative</th>
<th>Normative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meaningfulness</td>
<td>3.96**</td>
<td>0.45</td>
</tr>
<tr>
<td>Responsibility</td>
<td>-0.73</td>
<td>-0.88</td>
</tr>
<tr>
<td>Knowledge</td>
<td>1.53</td>
<td>0.84</td>
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</tbody>
</table>

Context Satisfactions

<table>
<thead>
<tr>
<th>Satisfaction</th>
<th>Normative</th>
<th>Normative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pay</td>
<td>-2.94*</td>
<td>-1.26</td>
</tr>
<tr>
<td>Security</td>
<td>0.05</td>
<td>2.03*</td>
</tr>
<tr>
<td>Co-workers</td>
<td>0.98</td>
<td>1.20</td>
</tr>
<tr>
<td>Supervision</td>
<td>-1.06</td>
<td>-0.10</td>
</tr>
<tr>
<td>Context</td>
<td>-0.72</td>
<td></td>
</tr>
</tbody>
</table>

*p < .01

**p < .001

scores in task identity when compared with the normative group. However, Walker also found the staff nurses to be
significantly lower in autonomy than the normative group. Similarly, Roedel and Nystrom (1988) found their staff nurses to have significantly higher scores in skill variety and task significance, and significantly lower scores in task identity than the normative group.

When the mean scores of the critical psychological states for the study sample were compared to the normative data, only experienced meaningfulness of the work was significantly higher in importance. This seems to indicate that the critical care nurses in the present study found their jobs rich in value and worth. Walker (1990) found no significance in comparisons of critical psychological states with the normative group.

When comparing context satisfactions mean scores, the present study group was significantly less satisfied with pay. Walker (1990) showed a significantly higher result in job security in her comparison with the normative group.

**Summary**

The findings of this study have been presented with respect to the sample of 127 critical care nurses in British Columbia. The nurses in this study were found to have characteristics somewhat different to those reported elsewhere. The level of education among the nurses in this sample was higher, and the age was generally younger than that noted in other reports. However, the employment status
seemed to be similar to that reported in the literature.

The results of the statistical analysis of the data indicated that the critical care nurses in this study were generally pleased with their work. In particular, they found meaningfulness in the task significance and skill variety of the job. Further, The strongest predictors of general job satisfactions were the motivating potential of the job, experienced meaningfulness of the work, and the context satisfactions.
Summary

The nursing literature has identified problems related to job satisfaction in nursing for more than a decade. Through all of this research, little has been done to resolve the identified sources of job satisfaction and lack of job satisfaction in the general nursing population. Further, there is almost no research in this area pertaining to critical care nursing.

This study was designed to explore the relationship between general job satisfaction and job design variables in critical care nurses, using an established conceptual framework entitled the Job Characteristics Model (Hackman & Oldham, 1980). The tools used to collect data regarding general job satisfaction and selected variables leading to general job satisfaction were the Index of Job Satisfaction (IJS, Brayfield & Rothe, 1951) and the Job Diagnostic Survey (JDS, Hackman & Oldham, 1980). A Nurse Characteristics Questionnaire was prepared by the investigator to identify personal and professional characteristics of the study respondents. The research questions developed for the study included: 1) What is the level of general job satisfaction in critical care nurses; 2) What is the relationship between general job satisfaction and the following variables:
motivating potential, critical psychological states, and context job satisfactions; and 3) What is the relationship between general job satisfaction and selected personal and professional characteristics of critical care nurses?

The questionnaires used for the study were mailed to a randomized list of critical care nurses compiled by the Registered Nurses Association of British Columbia. A total of 127 of the respondents met the established criteria. The statistical tests utilized included descriptive statistics, Pearson product moment correlation coefficient, multiple regression, and analysis of covariance.

The findings related to the personal and professional characteristics of the sample of nurses pertained to educational preparation, experience in nursing, maturity, employment tenure, area of practice, and employment status. What emerged was a profile of critical care nurses the majority of whom were employed full time, had a mean age of 36.8 years, an average of 13 years of nursing experience, employment tenure of over 6 years, held diploma education, had completed some post-basic coursework, and currently worked in an intensive care unit.

The information obtained about this group of nurses regarding personal and professional characteristics varied in its compatibility with that reported by provincial and national data. The educational level of this study's respondents appeared to be much higher in the areas of post-
basic certification as well as baccalaureate education, and the age distribution younger when compared to the provincial and national statistics. The employment status of the study group was similar to that reported by Statistics Canada (1990b). There was no documentation of national or provincial statistics enabling the comparison of experience, employment tenure, or area of practice.

The findings relating to the research questions indicated that nurses perceived their work to be meaningful, and to provide variety and significance in terms of required skills. However, nurses also perceived their work not well compensated in terms of pay, and that the ability to work on a task from beginning to end was difficult. The strongest correlation was found between meaningfulness of the work and general job satisfaction. Of the five variables regressed on general job satisfaction, motivating potential, experienced meaningfulness of the work, and context satisfactions were all found as significant predictor variables. Finally, it was determined that both nursing experience and age showed a positive relationship with general job satisfaction. However, these nurse characteristics demonstrated multicollinearity. Nursing experience had the stronger relationship with general job satisfaction.
Conclusions

The major conclusions arising out of this study data are:

1. The critical care nurses found their jobs rich in variety and significance, and allowed for some autonomous practice.

2. The core job dimensions that contributed most to the motivating potential of critical care nurses were skill variety and task significance.

3. The core job dimension that contributed least to the motivating potential of critical care nurses was task identity.

4. The results supported high positive correlations between general job satisfaction and: 1) motivating potential, 2) experienced meaningfulness of the work, and 3) knowledge of the actual results of the work activities. Further high positive correlations were seen between motivating potential and knowledge of actual results of work activities; as well as between experienced meaningfulness of the work and experienced responsibility for the outcomes of the work.
5. The results supported significant regressions between general job satisfaction and 1) motivating potential, 2) experienced meaningfulness of the work, and 3) context job satisfactions.

6. The results supported a significant positive relationship between general job satisfaction and nursing experience.

7. Compared to other similar professionals reported in normative data, critical care nurses were more satisfied with the skill variety and task significance of the job, and less satisfied with task identity.

8. Compared to other professionals, critical care nurses felt much more strongly about the experienced meaningfulness of the work and found their level of pay less satisfying.

9. Compared to other nurses, critical care nurses seemed to have higher levels of autonomy than ward nurses.

Implications

The implications of this study are apply to nursing administration, education, and nursing research. Nursing administration guides the overall practice of nursing. It
is administration's ability and responsibility to develop organizational elements which affect nursing job satisfaction. Further, nursing educators can use their understanding of job satisfaction variables to assist in helping the bedside nurse. Finally, nursing research can guide theory development as well as testing before and after implementation of strategies to augment job satisfaction.

Implications for Nursing Administration

The nurses in this study found the motivating potential of the job to be a significant predictor of job satisfaction. Several core job dimensions were seen as very important aspects of their work whether positive or negative. The positive dimensions included skill variety and task significance. The negative dimension included task identity. Nurse administrators should be aware that these variables are important in enhancing the work of nursing. Examples to incorporate this valuable information could include assuring that critical care nurses are encouraged to have challenge and variety in their assignments, which would encourage further skill variety. Another idea for administrators is to allow willing nurses the chance to work in a number of critical care areas which would also promote further skill variety. Finally, allowing the bedside nurses to expand their role with patients and the respective families would enable further skill variety. Examples would
include the nurse to be responsible for the educational preparation and pre-hospital tours for the patient and the family he/she would be caring for. This would have the added benefit of building nurse-patient rapport and therapeutic relationship skills.

Nurse administrators could be further guided by other study findings including the lack of job satisfaction in task identity. People who complete an entire unit of service tend to see that task as more meaningful than when they are responsible for only a small part of the job (Hackman & Oldham, 1980). This characteristic could be redesigned to enhance improved job satisfaction. Nurses could be encouraged to follow patients throughout their hospital stay to allow for increased knowledge of patient outcome. Further, nurses could act as primary nurses for patients if desired. Bedside nurses should be active members on committees such as Policy and Procedures, to augment their understanding of the purpose of performing tasks in certain ways.

Nurses should be encouraged to pursue autonomous practice. With nurse administrators utilizing participative management strategies, the autonomy of bedside nurses would be further augmented by sharing the power of decision-making with these nurses. According to Bennett (1983), increased participation in decisions that directly affect the nurses' work life results in higher productivity. Nurses should be
encouraged to voice their awareness of difficulties in their work environment as well as participate in the solving of these problems.

Context satisfactions significantly predicted general job satisfaction. The context satisfactions measured included job security, pay, co-workers, and supervision. There are ways nurse administrators could augment context satisfactions in nursing practice. One example of augmenting co-worker relations would be to establish a proper chain-of-command in conflict management which would ensure fair solutions when disputes arise. As for supervision, nurse administrators must continue to assure adequate supervision for nurses on a day to day basis. Essential management practices necessary for the nurse administrators include respect, fair treatment, support and guidance as needed. Pay, which was the characteristic with the lowest level of satisfaction, is beyond the realm of nurse administrators on a day to day basis.

Implications for Nursing Education

There are results from this study that can assist nursing education. The positive relationship between nurse experience and general job satisfaction can be explored by nurse educators as well. Allowing those nurses with more experience to work closely with less experienced nurses in an organized fashion such as preceptorships not only assists
the novice to learn from the experienced nurse's skill and wisdom, but important attitudes of job satisfaction can be fostered.

Further, predictors of general job satisfaction are experienced meaningfulness of the work and motivating potential. If novice nurses, while being educated, are taught to understand and incorporate the core job dimensions as important to them, they may experience increased meaningfulness of the work in general, and therefore have improved general job satisfaction.

Implications for Nursing Research

There are several implications for nursing research arising from the findings of job satisfaction of critical care nurses. One finding showed the importance of autonomy to general job satisfaction. Therefore, one area for research could include continued study into nurses' autonomy. Examples of research questions include "what does autonomy mean to nurses?" and "how can nursing foster autonomous practice within the health care system?". The answers could allow for innovative and useful ways of augmenting work satisfaction and job redesign.

The respondents perceived the critical psychological state of experienced meaningfulness of the work to be important in predicting general job satisfaction. According to the Job Characteristics Model, the precursor core job
characteristics to the critical psychological states, experienced meaningfulness of the work, are skill variety, task identity, and task significance. The nurses also found these variables important, which is consistent with the conceptual framework. The importance of these variables is documented in other nursing studies, therefore these variables could be utilized in comparing groups of nurses from different areas or magnet wards and short-staffed wards in regards to their job satisfaction. The collected data could be used to enhance the wards where job satisfaction is found to be at low levels.

Further research could include continuing comparison studies between ward nurses and critical care nurses. A limitation of the present study is the comparison between present results with the past results of other researchers. A study comparing job characteristics of two groups of nurses in the same time frame, from the same geographical location would be preferable. A comparison study could assist in the determination of whether these factors continue to be important through time. One could also determine why certain factors are seen as negative in one group as opposed to the other. With this knowledge, nursing could use the positive aspects of one area of nursing to develop and implement a plan to enrich the work of the other.
Summary

The findings of this study showed that critical care nurses in British Columbia were above the median in general job satisfaction scores. The job was considered rich in terms variety and significance, and allowed for some autonomous practice. Nurses were least satisfied with pay and benefits. The highest positive correlation and regression was seen between general job satisfaction and the experienced meaningfulness of the work.

The implications of this study advocate a supportive administration which enhances the positive aspects and reduces the negative characteristics of the work of nursing. The encouragement by nursing educators of relationships between senior and novice nurses would enable the learning of skills, transference of knowledge, and nurturance of positive attitudes. Finally, the conclusions of this study could be used by nursing research to allow for further comparative studies within nursing practice.
References


Appendix A

The Job Diagnostic Survey
(Hackman & Oldham, 1980)

This questionnaire was developed to study jobs and how people react to them. The questionnaire helps to determine how jobs can be better designed, by obtaining information about how people react to different kinds of jobs.

On the following pages you will find several different kinds of questions about your job. Specific instructions are given at the start of each section. Please read them carefully. It should take no more than 15 minutes to complete the entire questionnaire. Please move through it quickly.

The questions are designed to obtain your perceptions of your job and your reactions to it.

Please mail the completed postage paid form at your earliest convenience.

Thank you for your cooperation.

SECTION ONE

This part of the questionnaire asks you to describe your job, as objectively as you can. Please circle the number which most accurately reflects your answer.

Please do not use this part of the questionnaire to show how much you like or dislike your job. Questions about that will come later. Instead, try to make your descriptions as accurate and as objective as you possibly can.

1. How much autonomy is there in your job? That is, to what extent does your job permit you to decide on your own how to go about doing the work?

1-----2-----3-----4-----5-----6-----7

| Very little; the job gives me almost no personal "say" about how and when the work is done. | Moderate autonomy; many things are standardized and not under my control, but I can make some decisions about the work. | Very much; the job gives me almost complete responsibility for deciding how and when the work is done. |
2. To what extent does your job involve doing a "whole" and identifiable piece of work? That is, is the job a complete piece of work that has an obvious beginning and end? Or is it only a small part of the overall piece of work, which is finished by other people or by automatic machines?

1----2----3----4----5----6----7

My job is only a tiny part of the overall piece of work; the results of my activities cannot be seen in the final product or service.

My job is a moderate sized chunk of the overall piece of work; my own contribution can be seen in the final outcome.

My job involves doing the whole piece of work, from start to finish; the result of my activities are easily seen in the final product or service.

3. How much variety is there in your job? That is, to what extent does the job require you to do many different things at work, using a variety of your skills and talents?

1----2----3----4----5----6----7

Very little; the job requires me to do the same routine over and over again.

Moderate variety.

Very much; the job requires me to do many different things, using a number of different skills and talents.

4. In general, how significant or important is your job? That is, are the results of your work likely to significantly affect the lives or well-being of other people?

1----2----3----4----5----6----7

Not very significant; the outcomes of my work are not likely to have important effects on other people.

Moderately significant.

Highly significant; the outcomes of my work can affect other people in very important ways.
5. To what extent does *doing the job itself* provide you with information about your work performance? That is, does the actual *work itself* provide clues about how well you are doing - aside from any "feedback" co-workers or supervisors may provide?

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very little; the job itself is set up so could work forever without finding out how well I am doing.</td>
<td>Moderately; sometimes doing the job provides &quot;feedback&quot; to me; sometimes it does not.</td>
<td>Very much; the job is set up so that I get almost constant &quot;feedback&quot; as I work about how well I am doing.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Listed below are ten statements which could be used to describe a job.

You are to indicate whether each statement is an accurate or an inaccurate description of your job.

Once again, please try to be as objective as you can in deciding how accurately each statement describes your job - regardless of whether you like or dislike your job.

Write a number in the blank beside each statement, based on the following scale:

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Very Inaccurate</td>
</tr>
<tr>
<td>2</td>
<td>Mostly Inaccurate</td>
</tr>
<tr>
<td>3</td>
<td>Slightly Inaccurate</td>
</tr>
<tr>
<td>4</td>
<td>Uncertain</td>
</tr>
<tr>
<td>5</td>
<td>Slightly Accurate</td>
</tr>
<tr>
<td>6</td>
<td>Mostly Accurate</td>
</tr>
<tr>
<td>7</td>
<td>Very Accurate</td>
</tr>
</tbody>
</table>

6. The job requires me to use a number of complex or high-level skills.

7. The job is arranged so that I do not have the chance to do an entire piece of work from beginning to end.

8. Just doing the work required by the job provides many chances for me to figure out how well I am doing.

9. The job is quite simple and repetitive.

10. This job is one where a lot of other people can be affected by how well the work gets done.

11. The job denies me any chance to use my personal initiative or judgement in carrying out the work.

12. The job provides me the chance to completely finish the pieces of work I begin.

13. The job itself provides very few clues about whether or not I am performing well.

14. The job gives me considerable opportunity for independence and freedom in how I do the work.

15. The job itself is not very significant or important in the broader scheme of things.
SECTION THREE

Now please indicate how you personally feel about your job.

Each of the statements below is something that a person might say about her or his job. You are to indicate your own personal feelings about your job by marking how much you agree with each of the statements.

Write a number in the blank for each statement, based on this scale:

<table>
<thead>
<tr>
<th>How much do you agree with the statement?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
</tr>
<tr>
<td>Disagree</td>
</tr>
<tr>
<td>Strongly</td>
</tr>
</tbody>
</table>

16. It's hard, on this job, for me to care very much about whether or not the work gets done right.

17. Most of the things I have to do on this job seem useless or trivial.

18. I usually know whether or not my work is satisfactory on this job.

19. The work I do on this job is very meaningful to me.

20. I feel a very high degree of personal responsibility for the work I do on this job.

21. I often have trouble figuring out whether I'm doing well or poorly on this job.

22. I feel I should personally take the credit or blame for the results of my work on this job.

23. Whether or not this job gets done right is clearly my responsibility.
SECTION FOUR

Now please indicate how satisfied you are with each aspect of your job listed below. Once again, write the appropriate number in the blank beside each statement.

How satisfied are you with this aspect of your job?

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Extremely Dissatisfied</td>
<td>Slightly Dissatisfied</td>
<td>Neutral</td>
<td>Slightly Satisfied</td>
<td>Extremely Satisfied</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

___ 24. The amount of job security I have.

___ 25. The amount of pay and fringe benefits I receive.

___ 26. The people I talk to and work with on my job.

___ 27. The degree of respect and fair treatment I receive from my boss.

___ 28. The chance to get to know other people while on the job.

___ 29. The amount of support and guidance I receive from my supervisor.

___ 30. The degree to which I am fairly paid for what I contribute to this organization.

___ 31. How secure things look for me in the future in this organization.

___ 32. The chance to help other people while at work.

___ 33. The overall quality of the supervision I receive in my work.
SECTION FIVE

Now please think of the other people in your organization who hold the same job you do. If no one has exactly the same job as you, think of the job which is most similar to yours.

Please think about how accurately each of the statements describes the feelings of those people about the job.

It is quite all right if your answers here are different from when you described your own reactions to the job. Often different people feel quite differently about the same job.

Once again, write a number in the blank for each statement, based on this scale:

How much do you agree with the statement?

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
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<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
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<tr>
<td></td>
<td>Disagree</td>
<td>Disagree</td>
<td>Disagree</td>
<td>Neutral</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
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<tr>
<td></td>
<td>Strongly</td>
<td>Slightly</td>
<td>Slightly</td>
<td>Strongly</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

___ 34. Most people on this job feel that the work is useless or trivial.

___ 35. Most people on this job feel a great deal of personal responsibility for the work they do.

___ 36. Most people on this job have a pretty good idea of how well they are performing their work.

___ 37. Most people on this job find the work very meaningful.

___ 38. Most people on this job feel that whether or not the job gets done right is clearly their own responsibility.

___ 39. Most people on this job have trouble figuring out whether they are doing a good or a bad job.
Appendix B

An Index of Job Satisfaction
(Brayfield & Rothe, 1951)

Now please indicate how you personally feel about your job.

Again, each of the statements below is something that a person might say about her or his job. You are to indicate your own personal feelings about your job by marking how much you agree with each of the statements.

Write a number in the blank for each statement, based on this scale:

How much do you agree with the statement?

1  2  3  4  5  6  7
Disagree Disagree Disagree Neutral Agree Agree Agree
Strongly Slightly Slightly Strongly

__  40. There are some conditions concerning my job that could be improved.

__  41. My job is like a hobby to me.

__  42. It seems that my friends are more interested in their jobs.

__  43. I consider my job rather unpleasant.

__  44. I enjoy my work more than my leisure time.

__  45. I am often bored with my job.

__  46. I feel fairly well satisfied with my present job.

__  47. Most of the time I have to force myself to go to work.

__  48. I am satisfied with my job for the time being.

__  49. I feel that my job is no more interesting than others I could get.

__  50. I definitely dislike my work.

__  51. I feel that I am happier in my work than most other people.
52. Most days I am enthusiastic about my work.

53. Each day of work seems like it will never end.

54. I like my job better than the average worker does.

55. My job is pretty uninteresting.

56. I find real enjoyment in my work.

57. I am disappointed that I ever took this job.
Appendix C

Nurse Characteristics Questionnaire

58. EDUCATION PREPARATION. Please indicate the educational preparation that most closely describes your experience:

___ Diploma (College or Hospital School).
___ Diploma and one or more post-basic courses
___ Diploma and one or more university courses
___ Baccalaureate (basic program)
___ Baccalaureate (post-R.N. program)
___ Other (Please Specify)

59. EXPERIENCE IN NURSING. Please indicate the number of years that you have been employed in a nursing capacity since the time of your original registration.

___ Years of nursing experience since original registration.

61. MATURITY. Please indicate your age on your last birthdate.

___ Years of age.

63. EMPLOYMENT TENURE. Please indicate the length of time that you have been in your current employment.

___ less than 6 months    ___ from 3 to 6 years
___ from 6 months to 1 year ___ more than 6 years
___ from 1 to 3 years

64. AREA OF PRACTICE. Please indicate the area in which you are presently working.

___ Medical/Surgical ICU ___ Neonatal ICU
___ Coronary Care Unit ___ Pediatric ICU
___ Emergency ___ Other (Specify)

70. EMPLOYMENT STATUS. Please indicate the amount of hours that you have worked over the past year.

___ Full time
___ Permanent part time
___ Casual (full time hours per year)
___ Casual (less than full time hours per year)
___ Other (Please Specify)
Dear Critical Care Nurse:

My name is Barbara Turner. I am a graduate student in nursing at the University of British Columbia, and I am carrying out a research project for a Master's thesis. I am requesting participants to complete a questionnaire in order to assist me in learning more about job satisfaction of the critical care nurse.

This study is designed to assess the critical care nurses' reactions to various aspects of their work. The findings of this study will provide information that may be helpful in considering the nature of work for critical care nurses.

As you are a registered nurse working in a critical care position, I am asking for your participation in this study. To ensure anonymity, this questionnaire was mailed to you by the RNABC after your name was randomly chosen by the computer. All costs incurred for this service are covered by the researcher. You will not be required to identify yourself anywhere on the questionnaire and all information from the questionnaire will be kept confidential. After the questionnaires are analyzed, they will be destroyed. These results will be in the form of a research report so that no individual response can be identified.

The questionnaire will require approximately 10-15 minutes of your time. The completion of the questionnaire will be taken as your consent to participate in the study. Participation in this study is wholly voluntary. Any refusal to participate or to withdraw at any time will not in any way affect the participant's employment.

I am available for any questions or concerns regarding this study or your participation in it. Please feel free to contact me at this address:

(Personal data removed for reasons of privacy.)

Sincerely,

Barbara Turner, R.N., B.N.
Appendix E

Revised Index of Job Satisfaction

Now please indicate how you personally feel about your job.

Again, each of the statements below is something that a person might say about her or his job. You are to indicate your own personal feelings about your job by marking how much you agree with each of the statements.

Write a number in the blank for each statement, based on this scale:

<table>
<thead>
<tr>
<th>How much do you agree with the statement?</th>
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<tbody>
<tr>
<td>1</td>
</tr>
<tr>
<td>Disagree</td>
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<tr>
<td>Strongly</td>
</tr>
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</table>

___ 1. My job is like a hobby to me.

___ 2. It seems that my friends are more interested in their jobs.

___ 3. I consider my job rather unpleasant.

___ 4. I enjoy my work more than my leisure time.

___ 5. I am often bored with my job.

___ 6. I feel fairly well satisfied with my present job.

___ 7. Most of the time I have to force myself to go to work.

___ 8. I definitely dislike my work.

___ 9. I feel that I am happier in my work than most other people.

___10. Most days I am enthusiastic about my work.

___11. Each day of work seems like it will never end.

___12. I like my job better than the average worker does.

___13. I find real enjoyment in my work.

___14. I am disappointed that I ever took this job.
Appendix F

General Job Satisfaction by Educational Preparation:

Sample Size, Means, Standard Deviations and ANOCOVAs

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General Job Satisfaction by Tenure in Years:

Sample Size, Means, Standard Deviations, and ANOCOVAs

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General Job Satisfaction by Area of Practice:

Sample Size, Means, Standard Deviations, and ANOCOVAS

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General Job Satisfaction by Employment Status:

Sample Size, Means, Standard Deviations and ANOCOVAS

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<td>Part Time</td>
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*2 cases dropped from 'other' category