

AN INVESTIGATION OF THE OCCUPATIONAL HEALTH
STATUS OF NURSES WORKING IN AN ISOLATED SETTING

CENTRE FOR NEWFOUNDLAND STUDIES

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AN INVESTIGATION OF THE OCCUPATIONAL HEALTH STATUS OF NURSES
WORKING IN AN ISOLATED SETTING

BY

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in partial fulfillment of the requirements for
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ABSTRACT

An ethnographic method was used to examine the occupational health status of nurses working in an isolated community on the coast of Labrador. The researcher spent two months observing two nurses as they worked in the community, and collected data relating to the nurses' perceptions of their own work-related health. Data was collected using open-ended, unstructured interviews and participant-observation. Each nurse was found to experience different levels of work-related stress and job satisfaction. Both nurses, however, identified physical environment, role structure and role responsibilities as external variables affecting their work-related health. The effect of these variables appeared to be mediated by the internal variables of job satisfaction, stress response, physical health status and coping styles. The author recommended a re-evaluation of the nurses' role structure to reduce role conflict and role overload, and also recommended that specific educational preparation and professional support programs be established for these nurses.

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CHAPTER I

INTRODUCTION

The construct of health has taken on special meaning for the population at large. Individuals have increased their desire to assume personal responsibility for illness prevention; this desire has been apparent in the growth of the relaxation industry (Beehr & Newman, 1978). "There is growing concern by individuals, consumer groups, professionals, and all levels of government, with the issues of physical and mental illness and health maintenance" (Beehr & Newman, 1978, p.667). It has been over a decade since health promotion became a stated objective of the Canadian health care system (Lalonde, 1974). In 1986, Epp proposed a view of health that portrays health as "a part of everyday living" and "an essential dimension of the quality of our lives" (p.3). In the face of this "new vision of health" (p.3), health care professionals have found it necessary to re-evaluate their roles in order to incorporate the concept of health promotion into their functional models.

In 1947, the World Health Organization defined health as "a state of complete physical, mental, and social well-being and not merely the absence of disease and infirmity" (World Health Organization, 1947, p.1). According to Payne, (1983) health has "evolved into a multidimensional as opposed to a unidimensional concept"

(p.193). Biopsychosocial models of health emphasize the interaction of the psyche, the body and the society in which the individual lives. In addition, health can be regarded not merely as something that one has, but as a positive or adaptive relationship to the environment. "The care of health has come to be seen in a wider context, embracing behavioral and environmental factors" (Smith, 1981, p.1).

As an individual moves through his or her various life and lifestyle commitments, he or she also moves in and out of various environments. Because the work environment is a large part of the life environment, the individual's relationship to his/her work environment may have a significant effect on the health of the individual. Work can be defined as "(a) an effort or activity directed toward some (b) purpose such as production of goods and services which involve (c) economic gain and (d) is of a cyclical of rewarding nature" (Kasl, 1973, p.510). The work setting is the environment within which the individual carries out this effort or activity. Work is a central part of society (Warr & Wall, 1975), and as such, has significance for the individual as a member of that society. Because "many adults spend roughly half of their waking lives on work-related activities, it seems likely that social and psychological factors, in addition to physical factors on the job, may have important influences on their health" (Beehr & Newman, 1978, p.667).

In 1975, federal and provincial ministers of health considered occupational health to be a "priority health problem for Canadians" (George, 1976, p.4). The exact nature of the relationship between the work setting and individual health is not known. There has been some research in this area, however "traditionally, occupational health research and programmes have focused on acute accidents and injuries rather than more insidious work-related illnesses and diseases" (Health and Welfare Canada, 1977, p.2). Even though statistics now suggest that the workplace is safer than it ever was before (Smith & Stenger, 1985), "health promotion and illness prevention of the worker have had very little mention" (Smith & Stenger, 1985, p.291), and "health promotion must be a part of occupational health care" (World Health Organization, 1988, p.113).

Rationale for the Study

The emphasis in the health care field has clearly become that of determining that combination of variables (intrapersonal, interpersonal, and environmental) which interact to create the potential for illness. Identification of these variables is the key to the promotion of a positive health state in the individual. "Recent emphasis in the health field on prevention and wellness underscores the importance of identifying variables that contribute to

illness, but that may be influenced by appropriate interventions" (Hyman & Woog, 1982, p.155). The identification of factors that contribute to illness is a critical need in the field of occupational health: while the decade of the sixties saw an increase of 22% in the amount of work lost due to physical illness, there was an increase of between 152% for men and 302% for women in time lost due to non-physical illness (Kearns, 1973). Beehr and Newman (1978) suggested two reasons for the lack of research in this area: (a) "the belief that employee health is not as important as other work-related events" (p.666) such as employee performance and (b) "the belief that employee health and illness is caused primarily by physical rather than social or psychological events" (p.666). These attitudes appear to have influenced the direction that research into occupational health has taken.

One factor which has been reported to affect individual health status and has gained considerable notoriety in the last two decades is the experience of stress. According to Selye (1976) stress is the non-specific response of an organism to any demand made upon it. Lazarus and Monat (1977) identified three types of stress: (a) systemic or physiological stress involving disturbances in tissue systems, (b) psychological stress involving cognitive factors leading to the evaluation of the threat, and (c) social stress involving social units or system. According

to Margolis, Kroes, and Quinn (1974), there is "a growing body of evidence conducted at workplaces which suggest that occupational stress is a causal factor in disease" (p.659). Thus it is important, when examining the construct of occupational health, to give ample recognition to the construct of occupational stress.

Working as a health care professional has been associated with high levels of stress (George, 1976; Gray-Toft & Anderson, 1981). Many reasons for this have been cited, including the presence of clinical responsibility (Cramond, 1969) and high workload (Gray-Toft & Anderson, 1981). In nursing, much of the research in this area has focused on the stress experience of nurses in critical care settings (Kelly & Cross, 1985). Describing the occupational stress of nurses is an essential component of describing the occupational health of nurses.

The provision of primary health care in northern isolated communities in Canada is primarily the responsibility of registered nurses working in nursing stations. The nurse in the nursing station is responsible for providing twenty-four hour primary health care to the people who live in these isolated communities. The nurse carries out independent and interdependent nursing and medical functions with the assistance (via telephone or radio) of nursing and medical staff located in a secondary referral centre in the region. The nurse may work in the

nursing station alone, with the support of ancillary personnel from the community, or with as many as five other professional nurses, depending on the population size of the community the nursing station serves. The distance from a community to a secondary referral centre varies, depending on a community's geographic location. Small planes or helicopters are utilized as the primary mode of transport. "It has long been recognized that nurses in outpost nursing stations require certain skills and knowledge beyond those usually acquired in Canadian basic nursing programmes" (DuGas, 1974 p.525).

The work of the nurse in isolated settings has been the subject of some historical interest (Merrick, 1942), but little has been reported on either the professional practice of primary health care in isolated settings or occupational health issues related to the work environment of the nurse in an isolated setting. Hodgeson (1980) conducted an ethnographic study of selected nursing stations in the Canadian north, for the purpose of examining cross-cultural nursing practice: she observed that nurses in this situation may suffer from some degree of social isolation. "A northern nurse may find herself socially isolated so that interactions with the community are limited to a single strand or professional format" (p.24). Because of their unique work circumstances, nurses who work in this environment may have special needs relating to their own

health. Such factors such as diffuse role definition, hours of work, physical isolation, and cultural isolation may contribute to an increased risk of work-related stress and therefore work-related ill health. According to Hodgeson, (1982), although "most outpost nurses describe heavy responsibilities and relative independence of their job as major advantages" (p.108), role ambiguity and lack of meaningful cross-cultural communication may contribute to a certain level of job dissatisfaction and job stress in outpost nurses. There are special demands on nurses working in isolated settings which affect their interaction with the environment and therefore may affect their health.

Purpose of Research

The purpose of this research was to discover those factors which influenced the occupational health of nurses working in a selected isolated setting; specifically, to discover through the use of an ethnographic approach the health experiences of a group of nurses who were working in a nursing station in coastal Labrador, and to identify domains that represent various aspects of health experience in this group. Research activity addressed the following questions:

1. How do nurses in a specific isolated setting describe the construct of health? occupational health? ill health? stress? occupational ill health? occupational stress?
2. How do these nurses describe their own health?
3. Do nurses in a specific isolated setting experience work-related ill health? stress?
4. According to these nurses, what factors contribute to the development of work-related ill health? stress? assist in lessening work-related ill health? stress?
5. How do nurses in a specific isolated setting cope with ill-health, work-related ill health?

CHAPTER II

LITERATURE REVIEW

A review of the literature on occupational health must necessarily include many related topics such as health and illness, mental health, stress and occupational stress. Because the main purpose of this research was to discover the emic view of health (that is, the view held by the nurses working in the study setting) and because the amount of literature on health is vast, a comprehensive review of the literature on health has not been included. Selected models of health will be described in order to lay a theoretical foundation for an understanding of occupational health, and conceptualizations of health and variables affecting health will be discussed. A discussion of the construct of mental health will be included in order to provide a view of health which extends beyond traditional boundaries. In addition, research relating to occupational health, stress, and occupational stress will be reviewed. Because the informants in this study did not report any concerns about work-related, biological health hazards, literature on this subject will not be discussed. A review of the literature on work-related health and stress in the nursing profession will conclude the chapter.

Health and Illness

Conceptualizations of Health

Health has been "traditionally conceptualized in nursing as (a) a dichotomous variable (present or absent), (b) as a continuum (from wellness to death), and (c) as an inclusive holistic state" (Tripp-Reimer, 1985, p.95). Health, as a construct, can be interpreted in many different ways, and individual experiences and perceptions of health are not uniform. Smith (1981) organized views of health into four basic models:

1. Eudaimonistic model. This model evolved from ancient Greek philosophy, and is represented by Maslow's (1971) conception of health as self-actualization, or realization of individual potential. Any condition, physical or otherwise, that prevents self-actualization is considered an illness.
2. Adaptive model. In this model, health is a condition in which one achieves balance with one's environment, and disease is an inability to cope with environmental changes. In addition, ineffective social functioning means that the individual will be constantly challenged by his environment, unable to adapt, and will not be able to achieve health.

3. Role performance model. Health is considered in a sociological context, and an important element of health is role performance. Smith (1981) believes that this conception of health is minimal, as effective performance in one role does not imply effective performance in other roles; nor does it describe the relative significance of being able to perform in one role rather than another.
4. Clinical model. Health is characterized by "the absence of signs and symptoms of disease as identified by medical science" (p.46). Health and illness states are identified by the presence or absence of well-defined physical or psychological characteristics, and "the functioning of the human body is analogous to the operation of a complex machine" (p.46).

In contrast to the clinical, or biomedical model of health, Tripp-Reimer (1985), defined illness as a subjective phenomenon "concerning the individual's altered perception of himself" (p.95). The author stated that cultural factors, too, influence the definition of the health/illness experience. Tripp-Reimer suggested viewing health/illness as a grid, with the horizontal axis of disease/non-disease representing the view of these phenomena from outside of the culture of the individual (that is, more closely related to objective, biological processes) and the vertical

illness/wellness axis representing the view of these phenomena from within the culture of the individual (See Figure 1). Using Tripp-Reimer's model, an individual who is objectively and subjectively healthy would be placed in quadrant I. An individual who is both objectively ill and subjectively unwell would be placed in quadrant III. The objectively ill person who is subjectively well would occupy a place in quadrant II, while the subjectively unwell person who is objectively free of disease would occupy a place in quadrant IV. Quadrants I and III represent situations in which there is congruence between the objective and subjective experiences of health. Quadrants II and IV represent situations in which society and the individual view his or her health status incongruently.

Variables Affecting Health

Disease is "increasingly recognized as the result of a constellation of environmental and attitudinal variables that conspire against health" (Hyman and Woog, 1982, p.155). In order to assess the disease state of an individual, Hyman and Woog considered it necessary to evaluate three types of variables: " (a) characteristics of the immediate event requiring adaptation... (b) individual demographic, biological, and psychological characteristics of the person, and (c) social support factors" (p.156). Hyman and Woog

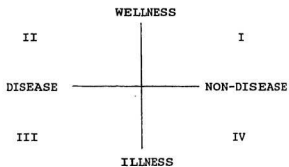


Figure 1. Health-illness grid (Tripp-Reimer, 1985).

also suggested a relationship between the effects of immediate stressful environmental variables and the onset of illness. These variables included (a) the long term impact of the environmental variables (Harvard School of Education, 1980), (b) the intensity, duration, and ambiguity of the event (Lazarus, Averill, & Opton, 1974), and (c) the degree to which the event can be anticipated and controlled (Dohrenwend & Dohrenwend, 1974). Health/illness states are also said to be affected by internal variables: "many authors have presented empirical evidence as to the mediating effects of various personality variables" (Hyman & Woog, 1982, p.158). Internal variables affecting the health/illness state include coping ability, cognitive style (Lazarus, et al. 1974), age, intelligence, education, and predominant coping mechanisms (Rabkin & Streuning, 1976).

In a study of ninety-eight adults in an urban setting, Muhlenkamp and Sayles (1986) used a self-report questionnaire to evaluate the relationship between social support, self-esteem and health behaviour. While the authors found that both self-esteem and social support were positive indicators of life style, social support was found to have only an indirect effect on life style through its effect on self-esteem. That is, social support, because of its effect on the individual's sense of belonging and mood, affected self-esteem, but had no direct effect on health

behaviour. In itself, self-esteem was shown to have a direct effect on the individual's health, but not on the individual's life style and health maintenance behaviours.

Satisfaction with one's work setting (Holmes, 1978) was cited as a mode of social support which may exert influence health/illness states. Hyman and Woog (1982) stated that "the individual seems to require individual enduring interpersonal ties to a group of people who can be relied on to provide emotional assistance and who share standards and values" (p.159), and, "peoples' perception of events rather than the events themselves seem to be a critical factor in disease onset" (p.161).

Moch (1988) described how health has come to mean "the ability to control" (p.119): if eating, smoking and stress can be controlled, then disease can be prevented. Diseases are referred to as being "under control" or "out of control" (p.119). Moch did not suggest that the experience of positive health is equivalent to being in control. Rather, she contended that being healthy means being able to regulate one's internal and external environment and when necessary, accept that some other force takes charge of one's life; in effect, an individual must achieve a balance between the demands of the environment and the adaptive resources of the individual.

It is necessary, then, to utilize a biopsychosocial perspective, (which incorporates all aspects of the health experience) when attempting to explain the constructs of health and illness. The importance of utilizing a multivariate focus has been illustrated in studies in which it was reported that persons who experienced objectively stressful lives did not necessarily experience illness (Dohrenwend & Dohrenwend, 1974; Lazarus et al, 1974). Such studies have demonstrated the significance of not holding fixed assumptions about health and illness. According to Payne (1983) the concept of holistic health emerged as a response to the inability of the biomedical model to explain the concept of health promotion, and "the notion of health and illness as a single continuum is gradually being questioned" (p.395).

Mental health

Although the construct of health is best understood in biopsychosocial terms, as in the above discussion, it is also helpful to analyze views of mental health. Kornhauser (1965) stated that "an adequate conceptualization of mental health refers to something more than passive adjustment, contentment, and freedom from inner tensions" (p.18); mental health should reflect the individual's level of manifest anxiety, degree of self-esteem, degree of interpersonal hostility and degree of sociability. Herzberg (1966) presented a similar view of mental health, but

included the component of psychological growth as an important factor in mental health: "mental health requires two kinds of development; adjustment so that negative states are minimized and also the occurrence of 'psychological growth'" (p.15). Psychological growth, stated Herzberg, includes: (a) knowing more: continuing acquisition of knowledge; (b) relationships in knowledge: individual organization and integration of what he/she is learning; (c) creativity: the production of something new; (d) effectiveness in ambiguity: the ability to live with insecurity, accept change and deal with complexity; and (e) real growth: knowing the self as he/she exists.

Mental health has been viewed as the product of the psychological experiences of the individual: cognitive, affective and relational (Health & Welfare Canada, 1988).

Mental health is the capacity of the individual, the group and the environment to interact with one another in ways that promote subjective well-being, the optimal development and use of mental abilities... the achievement of individual and consistent with justice and the attainment and preservation of the conditions of fundamental equality. (p.7).

In this definition, the authors proposed that mental health exists along a continuum that ranges from "minimal mental health" to "optimal mental health" (p.9). In minimal mental health, factors combine to produce a state of mental health in which the individual is distressed, unable to achieve goals, behaves destructively and has impaired cognitive functioning. In optimal mental health, factors combine to

produce "subjective well-being, optimal development and use of mental abilities, and achievement of goals consistent with justice...." (p.9). The authors of this definition support a broad view of mental health, a view that encompasses a full range of life processes and events; the authors distance the concept of mental health from the traditional focus on mental disorders and mental disease.

Occupational Health

Although "wellness in the workplace has surpassed the point of being a fad" and occupational wellness "is a firmly established construct of human resource management" (Chen, 1988, p.256), a definition of occupational health can be elusive. Although occupational health hazards are easily defined: "occupational health hazards are those health problems acquired as a direct result of the workplace" (George, 1977, p.1), the nature of occupational health is not so easily defined. Health and Welfare Canada (1977) defined occupational health as "those occupational or work-related factors potentially affecting worker (and secondarily community health, the resulting effects on total health status, and the programs for the promotion of health and work adjustment" (p.4). Researchers need to ask "how is well-being influenced by the institutions of employment?" (Warr & Wall, 1975). Kasl (1973) has organized factors indicating positive work-related mental health into the

following categories: (a) "indices of functional effectiveness", or the extent to which one is able to perform duties and activities on the job; (b) "indices of well-being", or measures of affect and job satisfaction; (c) "indices of mastery and competence", or growth and self-actualization and adequacy of coping; and (d) "psychiatric signs and symptoms" (p.509). Kasl (1973) suggested that in order to discover the relationship between mental health and the work environment, these factors should not be isolated; rather, the associations between them should be studied and evaluated.

Job Satisfaction

A frequently used indicator of occupational well-being is job satisfaction. Job status has been found to be positively associated with job satisfaction (Kornhauser, 1965). It has also been reported that workers in higher status occupations report more job satisfaction, but tend to worry more about their work (Langner & Michael, 1963). Job satisfaction is a multidimensional concept (Warr & Wall, 1975), but "the emphasis on job satisfaction research...has tended to be negative" (p.14). That is, to be satisfied with one's work has historically meant that one is experiencing a low degree of dissatisfaction, but this is an incomplete measure of work-related well-being. Thus, job satisfaction is not necessarily an efficient or accurate

indicator of positive job-related health. Research relating to job satisfaction will be reviewed later in a discussion of environmental factors affecting job stress.

Stress

Selye's (1976) definition of stress as the non-specific response of the body to any demand made upon it was an early characterization of stress as an internal condition resulting from the relationship between the individual and his/her environment. Schuler (1980) contributed a more elaborate definition of stress: "stress is a dynamic condition in which an individual is (a) confronted with an opportunity for being/having/doing what he/she desires, and/or, (b) confronted with a constraint on being/having/doing what he/she desires, and/or, (c) confronted with a demand on being/having/doing what he/she desires, or which the resolution is perceived to have uncertainty, but which will lead to important outcomes" (p.189).

While Schuler's definition relied less on physiological than psychosocial concepts, Schuler still emphasized the internal, dynamic nature of the stress response, while recognizing the environmental variables affecting the response. Schuler's model of stress proposed that (a) an individual can experience three types of stress: constraint stress, opportunity stress, and demand stress, (b) an individual's total stress represents the sum total of all

these stress processes, and stress is additive, (c) the intensity of the stress condition, whether constraint, demand, or opportunity is determined by the value of the outcomes and their respective uncertainty attached to the resolution of the stress condition, (d) organizational qualities may be associated with constraints, demands and opportunity stress, and (e) stress is associated with physical, psychological, and behavioral symptoms.

McGrath (1976) described stress as the situation which exists when a demand threatens to exceed the person's capabilities and resources for meeting the demands. Caplan, Cobb, French, Harrison and Pinneau (1975) defined stress as any characteristic of the environment which creates demands. In this definition, stress is an environmental characteristic, not a characteristic of the individual. Utilizing this definition, individual responses are termed strain, not stress, as in Selye's definition. A feature of stress research is the use of assorted terms to describe events. In a critique of stress research, Knapp (1988) recommended that the construct "strain" be eliminated from stress research in nursing, and that the term "stressor" be utilized to refer to those environmental factors which cause stress.

Kobasa, Maddi and Kahn (1982) described a pattern of attitudes, beliefs and behaviors in people who remained healthy after stress. These attributes included commitment

or sense of purpose, a feeling of situational control, and a conviction that change is both expected and desirable; they represented a link between stress, response to stress and health which has been labelled "hardiness".

Occupational Stress

"Though a direct cause and effect relationship cannot be demonstrated, by correlational data, it seems clear that job stress is a significant factor to consider when investigating problems of worker's physical and mental health" (Margolis Kroes, & Quinn, 1974, p.661). Margolis and Kroes (1974) defined job stress as a condition of work interacting with worker characteristics to disrupt psychological and physiological homeostasis. French and Caplan (1973) stated that occupational stress produces at least nine symptoms of psychological and physiological strain: job dissatisfaction, job tension, decreased self-esteem, threat, increased cholesterol levels, increased heart rate, increased skin resistance, and increased smoking.

Although the stress studies of the past frequently utilized two primary indices of occupational disease, coronary artery disease and myocardial infarction, a wider range of variables needed to be considered. Cooper and Marshall (1976) identified two elements which are related to the experience of stress at work: (a) "dimensions or characteristics of the person", and (b) "potential sources

of stress in the work environment" (p.11). According to Beehr and Newman (1978), the experience of occupational stress should be explored in the following ways: using an environmental context, using a personal context, examining the relationship between these two contexts and then observing the organizational and personal consequences of the interaction between the person and his environment.

Personal characteristics and job stress. Kahn, Wolfe, Quinn, Snoek, and Rosenthal (1964) and House (1974) suggested that personal characteristics of an individual moderate the relationship between job stress and employee health. Research in this area has taken two principal directions: a) the examination of the relationship between psychological measures and stress-related physical disease and b) the relationship between stress and or coronary-prone behaviour patterns and the incidence of disease (Cooper & Marshall, 1976). The Western Group Collaborative Study (Rosenman, Freidman & Strauss, 1964, 1966) was a prospective study of the relationship between high anxiety, neuroticism, and coronary heart disease. The complexes of behaviour patterns known as Type A and Type B were first identified from this study. Type A behaviour pattern includes behaviours such as time urgency, aggressiveness and tense facial muscles (Jenkins, Rosenman, & Zysanski, 1974). French and Caplan (1970), in discussing the strength of association between Type A behaviour and coronary heart

disease and myocardial infarction, stated "such wealth of findings make it hard to ignore that Type A is a relevant syndrome" (p.385). Beehr and Newman (1978) interpreted the research on role overload as belonging to a category of personal factors affecting stress. Role overload, when the worker is unable to accomplish his workload in a specified time, may be related to personal ability to do the work (French & Caplan, 1973). French and Caplan reported that both quantitative overload (having too much to do) and qualitative overload (having work that is too difficult) are significant sources of stress. Beehr and Newman (1978) stated, however, that investigations in this area have tended to identify correlational, not causal relationships.

Environmental factors and job stress. In a sociological context, a "major source of occupational stress is associated with a person's role at work" (Cooper & Marshall, 1976, p.16). "Role characteristics have been one of the most widely investigated organizational qualities in stress research" (Schuler, 1980, p.195). Role ambiguity "exists when an individual has inadequate information about his work role", while role conflict exists "when an individual in a particular work role is torn by conflicting job demands" (Cooper & Marshall, 1976, p.16). Cooper and Marshall summarized numerous studies that have examined the relationship between role conflict and role ambiguity, and objective and subjective measures of occupational stress and

health; these authors have concluded that as the working population becomes less focused on manual labour and more focused on professional job roles, occupational stress due to role-related issues will be more prevalent than stress related to physical conditions of work. Abdel-Halim (1978) examined the relative importance of role conflict, role ambiguity and role overload (defined as "the lack of adequate resources required to comply with role expectations or demands", p.565). The author's results indicated that role ambiguity and overload among workers was related to job dissatisfaction and job anxiety. Role overload was found to be especially a problem for workers with less autonomy, while role ambiguity was shown to be a source of stress for workers of all categories, although more strongly related to job dissatisfaction in lower category workers. Schuler (1980) reported that "role ambiguity often tends to be more highly related to stress than role conflict" (p.195). In an attempt to explain why workers whose roles are more autonomous experience greater job satisfaction, Abdel-Halim (1978) postulated that these workers may become more involved in developing their work role, and gain some satisfaction from coping with role ambiguity. However workers with little power, he stated, may spend much of their time trying to resolve role ambiguity and experience frustration in the process.

Other sources of stress at work are the worker's interpersonal relationships. French and Caplan (1973) described poor relationships as relationships in which there is little mutual support and trust. Interpersonal conditions in the occupational setting are related to the individual's "need for interpersonal recognition and acceptance"; as well, interpersonal conditions have major "ripple effects" throughout the whole organization (Schuler, 1980, p.199). An interpersonal problem such as mistrust, stated Schuler, may cause mutual withdrawal from the relationship and impair the abilities of both workers to achieve job-related tasks. Such impairment of functioning may lead to increased frustration and mistrust between workers, and increased dissatisfaction (Schuler, 1980; French & Caplan 1970). According to Warr and Wall (1975) workers' "ability to cope with stress is clearly mediated by the support available from their colleagues" (p.80).

The effects of being a member of an organizational structure have also been studied (Cooper & Marshall, 1976). Participation in decision-making was found to relate directly to feelings of job satisfaction, lower feelings of threat, and high self-esteem (French & Caplan, 1970, Kasl, 1973). Argyris (1973) stated that certain organizational structures can inhibit creativity and self-determination in

a worker, but that different types of workers will find different types of organizations compatible with their relative need for independence.

Consequences of occupational stress. Occupational stress can affect both the individual worker and the organization. The physical consequences of occupational stress range from commonly studied effects on the cardiovascular system, such as elevated blood pressure (Kasl & Cobb, 1970), high cholesterol levels (French & Caplan, 1973), and elevated heart rate (Hennigan & Wortham, 1975) to self-reports of varying physical illnesses (Margolis, Kroes & Quinn, 1974). In a prospective study of women, Haynes and Feinlib (1980) found that working women who lack autonomy and a supportive working environment had an increased rate of coronary heart disease, as compared with other working and non-working women. Although Beehr and Newman (1978) doubted the validity of many studies linking stress and occupational stress to specific physical symptoms, Selye's (1976) concept of the stress response as an event influenced by neurochemical processes has allowed researchers to identify potential sequelae of stressful situations and therefore measure the specific physiological effects of stress.

Margolis, Kroes, and Quinn (1974) identified a significant relationship between an indicator of occupational stress, role ambiguity, and an indicator of

mental health, self-esteem, and stated that occupational stress can cause both short and long term psychological distress. Abdel-Halim (1978) used the Spielberger State-Trait Anxiety Indicator (Spielberger, Gorsuch, & Lushene, 1970) to measure work-related tension and anxiety. Role ambiguity, as an indicator of job dissatisfaction, was found to increase job anxiety, especially in workers who had little decision-making power in their work roles. Other indicators of mental distress used in occupational stress studies have included self-reported depression and neuroticism (Beehr & Newman, 1978; Beehr, 1976; Margolis, Kroes, & Quinn, 1974), and psychological fatigue (Beehr, Walsh & Taber 1976).

Occupational Stress in Nurses

"Despite a period of over twenty years in which nurses have been concerned with stress, research on the work-related stress of nurses is considered to be in its infancy" (Hache-Faulkner & MacKay, 1985, p.41). This is the case even though "there is unsubstantiated evidence that nurses and doctors have a high rate of addiction to drugs, such as tranquilizers...this may be the result of the psychological pressures of the profession" (George, 1976, p.25). Bates and Moore (1975) reported that stress scores relating to three aspects of role stress (role conflict, role ambiguity, and role overload) were significantly higher for interns and nurses than for nurses aides and hospital

administrators. This was attributed to the presence of responsibility for patient care. It was specifically reported that nurses felt overloaded with work and unable to influence administrative decisions. Leatt and Schneck (1983) stated that the nature of nursing demands that the nurse be continually exposed to crisis situations, and that this exposure makes them prone to stress reactions. "There is evidence from the literature that the practice of nursing can be accompanied by stress which can have negative consequences" (Kelly & Cross, 1985, p.322). According to Garbin (1979) "nurses are often successful in helping patients cope with stress, but they less often analyze their own situations" (p.20). Cronin-Stubbs and Velsor-Freidrich (1981) stated that stress in nursing is poorly investigated due to the complexity of the individual and the environmental factors which influence the stress experience of the nurse.

Occupational stress variables. Halsey (1985) listed the behaviours of nurses who perceived an imbalance between the demands of their work and their ability to meet those demands. These behaviours included numerous errors, poor judgement, low productivity, increased absenteeism, negativism, psychiatric or physical illness, and failure to contribute to the unit. Hickman (1985) described a relationship between the stress-impaired nurse and illnesses such as respiratory infections, insomnia, stomach upsets,

anxiety, and fatigue. Hardin (1985) organized the variables related to nursing stress by separating them into internal and external categories. Stress variables which are categorized as external included time-constricted work environment, formal responsibility for lives of patients, workload, patient crises, and social support. Stress variables which are categorized as internal include psychological factors such as cognitive abilities, abstract thought and intelligence, individual perceptions of events, commitment, and motivation. Hardin also suggested that the research into nursing stress needs to progress towards differentiation of the nature of the stress response as it occurs in individual nurses.

Garbin (1979) synthesized stress research in nursing and observed that there are three broad factors which influence the nurse's perception and response to job stressors: (a) sources of stress in the work environment, such as poor interpersonal relationships, (b) sources of stress outside of the work environment such as a family and financial problems, and life crises, and (c) characteristics of the individual, including personality patterns, predisposition to stress and coping behaviours. The author also stated that it was precisely the complexity of these factors which created difficulty in stress research.

Bargagliotti and Trygstad (1987) concluded that research into the occupational stress of nurses will yield varying results depending on the methodology employed. Quantitative research tends to identify discrete events such as management, patient care situations and staff relationships as being stressful, while qualitative research tends to cite processes over time, such as the development of collegial relationships, as causing stress in nursing. The authors submitted that the concept of occupational stress in nursing can be well served by qualitative research, as the method permits the description of complex relationships.

Differences in occupational stress across various settings. There have been numerous studies, many of them observational and descriptive, which have described stress as it is experienced by intensive care and critical care nurses (Kelly & Cross, 1985). Gentry, Foster and Froehling (1972) utilized a comparison group method to demonstrate that critical care nurses experienced more intensive psychological stress reactions in relation to their work than other non-critical care nurses. These psychological responses included depression, hostility, and anxiety. Hay and Oken (1972) described the use of the defence mechanisms of submergence, denial, withdrawal, and forced cheerfulness by intensive care nurses. In 1973, Bilodeau described nurses' reactions to critical care nursing and found that

nurses tended to utilize mechanisms of coping with stress which did not foster job satisfaction or enhance patient care. Some examples of coping mechanisms demonstrated by this group of nurses included: (a) withdrawing from patient contact, (b) acting out feelings of withdrawal by calling in sick or coming in late, (c) focusing on equipment rather than on patients, and (d) denying or repressing their feelings. Bailey, Steffen, and Grout (1980) used self-report techniques to identify major stressors in intensive care nursing. These stressors included: relationships with management, interpersonal relations among the health team and responsibility for direct patient care. Stehle (1981) reported high levels of work-related stress in critical care nurses. The authors suggested that the high level of stress was related to environmental factors, workload, frequent death of clients, and interpersonal relationships among members of the health care team. Using a self-administered questionnaire to measure the relationship between job stress, job satisfaction, and the psychological symptoms of critical care unit nurses, Norbeck (1985) was able to report that an increase in the level of perceived job stress was directly related to low job satisfaction and a high level of psychological symptoms.

Although much of the research in occupational stress in nurses has focused on the critical care setting, the intensive care environment is not unique in terms of high

stress levels. For too long, this has been assumed to be the case, perhaps because of the initial, apparently overwhelming impact of work role demands on the technical aptitude of the nurse. Leatt and Schneck (1980) reported no real difference between stress factors as experienced by head nurses on general medical-surgical units and intensive care units, also concluding that workload constituted a major source of stress in nursing. In an investigation of a large sample of nurses in a hospital setting, job satisfaction was found to be significantly greater on those units that were labour intensive (including critical care units), and commitment and turnover did not differ significantly between units (Wakefield, Curry, Price, Mueller & McCloskey, 1988). The authors stated that "the belief that intensive care units are more stressful may simply not be true " (p.105).

In a comparative study of nurses' perceptions of sources of stress in their work environments, Olsen (1977) discovered that interpersonal relationships with physicians and other nurses, role conflict and ambiguity, and specific factors inherent in the work itself were most frequently cited as sources of stress by nurses from most work settings. Gray-Toft and Anderson (1981) measured the symptoms of stress in a population of nurses representing clinical units with a broad range of client health problems. Nurses on all units studied and at all levels of training

experienced the same source of stress: feeling that they were inadequate in meeting the emotional needs of clients and workload. Similarly, Livingston and Livingston (1984) found no differences in stress levels across nursing care settings within the hospital; however, symptoms of psychological stress were found to be increased in younger, less experienced, and lower-ranking nurses. Perhaps more importantly, a strong association between the amount of patient contact and stress across all nurses' job rankings and ages was demonstrated. Kelly and Cross (1985) utilized a questionnaire survey method to assess the stress factors, coping behaviors and recommendations for alleviating stress in a sample of 102 nurses who worked in intensive care and medical-surgical units. Variables measured in the questionnaire were those which were "consistently selected by nurses as important in their work setting" (p.322). The researcher elicited information about five major stress areas: interpersonal, environmental, patient care problems, and management-based problems. A range of coping behaviors was suggested in the questionnaire, including statements such as "I cry" and "I try to forget my problems". For these two sections, respondents were asked to respond to a Likert-type scale. The final section of the questionnaire asked the respondents to indicate how effective suggested methods might be in reducing or coping with stress. Ward nurses were reported to perceive all environmental factors

as being more stressful than the intensive care nurses reported. Ward nurses were also more stressed by inadequate staffing than were the intensive care nurses. The ward nurses tended to use crying, sleeping less and eating more frequently to cope with stress than did the intensive care nurses. The authors utilized these findings to recommend an increase in staff numbers, improved communication among health team members, and better communication between nurses and nursing administration.

In a comparison of stress as experienced by public health nurses and hospital-based nurses, Hache-Faulkner and MacKay (1985) reported that there was little difference in the level of stress experienced by nurses as measured by the State-Trait Anxiety Inventory (Spielberger, Gorsuch & Lushene, 1970). However, there were differences reported in the nature of the stressors experienced. While public health nurses and hospital non-critical care nurses cited heavy workload and shortage of staff as stressful, critical care nurses cited very sick patients as the sources of stress.

Dawkins, Depp, and Selzer (1985) utilized a survey design to identify and quantify the relative stressfulness of job-related events in psychiatric nursing. The items perceived as most stressful included "not being notified of changes before they occur" and "dealing with people in management positions who are unable to make decisions"

(p.10). Six general categories of stressful events were identified: administrative/organizational issues, staff conflict, limited resources, scheduling issues, staff conflict, negative patient characteristics, and staff performance; fifty per cent of the stressors identified were related to organizational issues. In a study sample of psychiatric mental-health nurses, Larson (1987) identified the thoughts and feelings of nurses which, when not disclosed, discussed or externalised by nurses, become "helper secrets" (p.20) and may act as internal stressors. These processes included emotional and physical distancing (22%), feelings of inadequacy (20%), anger (20%), emotional over-involvement (11%), and feeling that too much is being demanded (5%).

In a survey of nurses attending the authors' stress management workshop, Cronin-Stubbs and Velsor-Friedrich (1981) identified the six most frequently occurring professional stressors: interpersonal relationships, work overload and overwhelming responsibilities, high expectations for self and others, aspects of the work itself, sense of time urgency and deadlines, and poor self-esteem. However, 60% of the stressful factors cited were personal stressors and 38% were professional stressors. The most frequently cited adaptive mechanisms included interpersonal relationships, exercise, and relaxation. The most frequent maladaptive mechanisms cited were eating,

sleeping, and ignoring the stressful situation. The nurses who described maladaptive mechanisms also tended to report physical stress reactions such as headaches, fatigue, hypertension, depression and gastrointestinal disorders. Fifty per cent of these nurses stated that job-related stress had a negative effect on their health.

Burnout. Burnout is the result of high levels of occupational stress (Maslach, 1976), and is "the endpoint of a continuum of occupational stress" (MacBride, 1983, p.2). Burnout has been reported to lead to lowered job satisfaction, minor medical ailments, lowered job performance and morale, impaired self-esteem, anxiety, depression and apathy (MacBride, 1983).

Nurses who experience high levels of stress may have accompanying feelings of anxiety and powerlessness (Williamson, Turner, Brown, Newman, Serles & Selleck, 1988). Keane, Doucet and Adler (1985) reported that when nurses feel that they have little control over the factors which affect how they do their jobs, the resulting anxiety can lead to burnout. McCrane, Lambert, and Lambert (1987) utilized the concepts of hardiness and burnout in their investigation of occupational stress in nursing. It was discovered that nurses who scored well on a scale that measured hardiness experienced less burnout, but hardiness was found to have no direct interactive effect on burnout. Rather, hardiness, when coupled with workload, was shown to

relate indirectly to perceived job stress, which was found to predict burnout. The authors postulated that the concept of hardiness may be less effective in explaining the individual's response to stress in the work setting than explaining stress related to life events. The authors concluded that their findings were consistent with the findings of Pearlin and Schooler (1978), who stated that psychological resources and coping responses are less effective in mediating work strain than strain relating to life events.

Outpost Nursing

Development of Health Care in the North

The provision of health care to the people of northern Canada is often said to have begun with a nineteenth century explosion of missionary travel to the north. To accept this statement absolutely is to ignore the systems of health care that were already present within aboriginal cultures. However it is true that as missionaries and other southern travellers pressed further into more isolated localities, aboriginal contact with non-aboriginal people brought massive epidemics which threatened their very survival: "as the ecology changed, so did the epidemiology" (O'Neil, 1986, p.121). These epidemics forced aboriginal people to seek assistance from non-aboriginals, who had the medical resources to deal with the outbreaks of disease (O'Neil,

1986). As health care became an integral part of missionary work, a bureaucratized system of health care for native people was born. At the turn of the century, Sir Wilfred Grenfell was instrumental in improving medical care for the people of Labrador by establishing a series of small hospitals in the region. By the 1950's, a network of small coastal nursing stations was in place; the International Grenfell Association, and later Grenfell Regional Health Services, assumed responsibility for health care in Labrador and northern Newfoundland (Weller, 1981). The governing principle of health care in Labrador, according to Paddon (1984) was that "if there were enough doctors and hospital beds, illness and disability would be defeated automatically" (p.356). As late as 1979, however, Sarsfield (as cited in Weller, 1981) stated that health care in Labrador and northern Newfoundland was still inadequate and below the standards of other parts of Canada. On a national level, the Department of Indian and Northern Health Services was established in 1955, and by the 1970's, nearly all communities in northern Canada with a population of over 100 had nursing stations, staffed by one or more professional nurses and auxiliary staff (O'Neil, 1986). In the Northwest Territories, the federal government has recently transferred responsibility for health care to the territorial

governments; the federal government retains responsibility for health care for natives and others in more southerly isolated settings.

The development of this system of northern health care has not been without its problems. According to Wenzel (1976) a critical analysis of the health care system shows that "serious problems associated with southern induced technology and communications are having their effect on the relationship between northern medical services and the population it is in place to serve" (p.14). The encroachment of North American culture has exerted tremendous psychosocial, cultural, and economic pressures on native and northern peoples. Despite a claim that, in Canada's north, "primary health care services appear to be among the best in the world" (O'Neil, 1986, p.120), as health problems such as tuberculosis have diminished, alcoholism and family breakdown have become increasingly predominant. Seltzer (1980) explained that "the economic and resource motivated post-war invasion of the north by the white people led to an erosion of the traditions of the native individual" (p.173). This erosion clearly has led to psychosocial strain and symptoms of psychosocial strain such as depression, family breakdown, alcoholism, and crimes of violence have steadily increased. Further,

Despite laudable achievements in reducing mortality due to infectious disease, Indian and Inuit populations continue to exhibit morbidity and mortality rates in excess of the poorest third world countries.

(O'Neil, 1986, p.120)

Clients in northern, isolated communities (the majority of whom are of aboriginal birth) present a challenging range of physical and emotional health problems to be addressed by the principle health care provider. In isolated settings, this health care provider is most often a nurse.

Nursing in Isolated Settings

The cornerstone of health care in isolated settings is the nursing station. Hodgeson (1980) described the nursing station as a "total institution" as defined by Coffman (1961). The nursing station houses clinical outpatient and inpatient facilities, and in many communities, nurses work and live in the same building. In the nursing station, nurses are together as a work group and live together as a family, capable of extending emotional and professional support to one another. However, there also exists a lack of privacy in this arrangement. "One of the major dilemmas faced by northern nurses concerns the need to create a private life while living and working in essentially public buildings" (Hodgeson, 1980, p.110). The institution of the nursing station is a potential platform for stressful situations, and there is a need for mutual support. However, there is also a need for privacy. The nurse needs to mediate between the desire for personal space in which to

relax, and the need to interact with white and native societies, stated Hodgeson. The Labrador Inuit Health Committee (1985) explained the problems of health care in the north:

The health care professionals by and large are from urban areas and stay for short periods. Their professional training leaves them unprepared for careers in rural/remote locations. They have no cross-cultural experiences or training before they arrive. The Inuit are expected to pour out the intimate details of their medical histories and their lives in a language that is not always their mother tongue, to someone of an alien culture. (p.2)

When nursing stations were first established, many nurses were recruited from Great Britain. O'Neil (1986) accused these nurses of bringing with them colonial and maternalistic attitudes which structured their relationship with the communities in which they worked. After observing the work dynamics of one nursing station in the central Arctic, O'Neil compared the behaviour of a young, Canadian-educated nurse and an older nurse educated in Britain. O'Neil cited the following differences:

1. The Canadian trained nurse, having fewer advanced clinical skills (such as midwifery) than the British trained nurse, relied more heavily on consultation with physicians.
2. The British trained nurse liked to maintain an intimate knowledge of people in the community, which would then allow her to intervene in a far broader range of community problems, fostering

community dependence. In contrast, the Canadian trained nurse attempted to keep her personal life separate, resisting contact with community members and resenting any sign of community dependency on her.

3. The British trained nurse had a need to dominate the community's health care policies and practices. The Canadian trained nurse lacked the maturity and confidence to "control" the community to the same extent as the British trained nurse.

O'Neil reported that the community disapproved of the behaviours of the Canadian trained nurse; the community felt she was insensitive and unacceptable. Differences in health care philosophy caused conflict between these nurses, and they could not come to an agreement as to how to respond to patient care demands, especially after regular clinic hours.

Noble (1978) stated that the tendency is for the nurse to "retreat into the white community, maintain a southern nine-to-five clinic schedule and a very distant relationship with native people" and that "a strong resentment develops when the nurse tells the person to 'come back tomorrow...the nursing station is closed'" (p.16). Kennedy (1982) reported that "the involvement of the nurse in Labrador community life varies considerably" (p.101) and stated that "by adopting a neutral position the nurse remained unaffected by the subtle kinds of social reciprocity which naturally welds

most outside administrators to one or another social network" (p.101). This detachment of the nurse helped her to remain neutral and effective, stated Kennedy.

It has been reported that "the nurse likes it when people do what she tells them" (Floyd, 1978, p.11). "The feeling of loss of contact between the nurse and the Inuit is perhaps the most notable comment of the Inuit perception of the medical establishment", stated Wenzel (p.14). It is particularly disturbing to note that "Inuit say they would not go to the nursing station because the nurses 'disliked Inuit and stayed in all the time'" (Wenzel, p.14). In such a challenging and complex health care delivery situation, it is not surprising to note that the "turnover of nurses is high" (Weller, 1981, p.73).

It is apparent from a review of the literature that the experience of health is characterized by a complex interaction of phenomena, and that occupational health is influenced by many variables. Researchers are beginning to identify the complex of variables which affects nurses' occupational health status, and these variables can be categorized as intrapersonal or environmental. The work of the nurse in isolated settings has been studied in relation to role structure and relationships with the community, but specific characteristics of the nurse's work environment and his or her experience of work-related health have not been reported.

CHAPTER III

METHODOLOGY

Design

An ethnographic approach was used to collect and analyse research data. This anthropological method supports the holistic concept of man (Bush, Ullom & Osborne, 1975) and was considered to be appropriate for the investigation of the biopsychosocial construct of occupational health. The goal of the nurse-researcher who uses the anthropological method is "to grasp the patient's point of view, his relation to life, and to realize the full vision of the phenomena of health and illness" (Ragucci, 1972, p.488).

Ethnography is a naturalistic method of studying human behaviour through observation in the natural human setting. (Ragucci, 1972). The nurse-researcher enters the cultural group for the purpose of understanding the cultural elements from the point of view of members of the culture (this is known as the emic view). The use of ethnography is indicated as a research method when very little is known about the phenomenon to be studied and new data needs to be generated (Field & Morse, 1985). Ethnography, stated Goodenough, (1957) should be understood as the discovery of conceptual models within which a group or society operates.

Data Collection

The researcher initially requested permission from the Director of Nursing, Community Medicine Division, Grenfell Regional Health Services to invite nurses working in nursing stations to participate in the study. The Director of Nursing then forwarded letters to those nurses who, in her opinion, might be open to participation in such research and who were working in settings where the physical facilities could support such research. Participants were initially difficult to find; potential participants expressed discomfort with what they perceived to be an intrusion into their work and private lives. Finally, nurses in Tunganiksavik (not its real name) agreed to participate. The nursing administration of Grenfell Regional Health Services was very cooperative in allowing the researcher to utilize the physical facilities and resources of the organization during the data collection period.

Through the use of an ethnographic method, the author attempted to discover the individual and culturally bound conceptualization of work-related health in a group of nurses working in a nursing station. The main aim of this emic study was the discovery of the native principles of classification and conceptualization (Tripp-Reimer, 1985, p.95). For the purpose of this study, the researcher studied the nursing station in Tunganiksavik for a period of approximately two months. The researcher lived in the

nursing station, and interacted with the nurses as they moved through their professional and personal lives. The researcher utilized two specific ethnographic techniques: participant-observation and guided, open-ended interviews.

Participant-observation

Participant-observation is a form of systematic observation in which the major instrument is the researcher. Participant-observation exists as a theoretical continuum of roles, ranging from complete participation in a group activity to that of complete, separate observer. In the middle range of this continuum, the researcher occupies a role which may change from participant as observer to observer as participant, depending on the demands of the situation.

Byerly (1976) cited three dilemmas inherent in the use of participant-observation in nursing research:

1. objectivity vs. subjectivity: The researcher, in utilizing a method which relies heavily on interactional data, must recognize the potential influence of observer bias. However, a high number of interactions, conscientiousness in note-taking, and the maintenance of a neutral status in the field situation minimizes this effect.

2. preservation of scientific integrity vs. protection of the rights of the informant or group: the researcher has a moral and legal responsibility to inform the subjects of the purpose of the research and how the information will be sorted and utilized. Behaviour must be reported without judgement. Informed consent must be obtained. Individual rights are the prime concern of the researcher in this regard.
3. intervention vs. non-intervention: the presence of the nurse-researcher establishes a potential for researcher action as a nurse in relation to those he/she is studying.

As a rule, this researcher did not become involved in nursing action related to the subjects she was studying. However, when the participants requested that she use her skills as a professional nurse in an emergency situation, it was no longer possible or appropriate to remain in an observer role, and the role of participant as observer was assumed.

The process of uncovering personally and culturally bound information from the group being studied can be characterized using Leininger's (1985) stranger-friend model. This model helps to describe behaviour of group members in terms of "frontstage" and "backstage" behaviour. When the researcher-stranger first enters the group, the

process of data collection is coloured somewhat by the tendency of the group members to show only "frontstage" behaviour; that is, many facades are presented in an attempt to preserve the group's concept of social reality. Some degree of mistrust and uncertainty is present. Once the nurse-stranger has been accepted into the group, and the group has accepted that the status quo of the group will not be disturbed, the stranger is admitted into the "backstage" behavioral set of the group. Mutual trust, sharing, and some display of interest and commitment to the investigative process are demonstrated by the group members. Once the "backstage" has been reached, the researcher-stranger is able to utilize group members to validate her impressions.

The participant-observation method was used to observe the group, learn from the group, and describe the group in relation to the domains being studied. On-site open-ended interviews with the nurses were used to collect data relating to these nurses' perceptions of their own work-related health, ill health, or stress. In order to overcome the problem of observer bias and its effect on validity, this researcher gained permission to enter and leave the setting as desired in order to protect against the scene being "set up" for the researcher; as well, the

researcher engaged in "spot" observations, randomly selecting the time for an observation to occur as suggested by Field and Morse (1985).

Typically, the process of data collection was carried out by the researcher day-to-day and hour-to-hour, with the researcher stationing herself in strategic positions from which she could observe the activities of the nurses and the nursing station staff. The participant-observation approach depends heavily on the use of field notes. Field notes are a type of process recording which assist the researcher in recording and organizing various features of an event. Occasionally, notes taken during actual field observations represented a compact version of what actually happened, and the researcher later filled in the details. It was often possible to obtain a nearly exact record of an interaction or an event at the time the event occurred. (For an example of the field note form used by this researcher, refer to Appendix A).

The researcher entered the setting for the purpose of observing a wide range of selected events which related to the nurses' own experience of health and health-related behaviour in the work environment. Observation and participation in work group activities were not restricted to normal work hours, although an attempt was made to limit formal observation during hours other than work hours. In addition to field notes, the researcher utilized a journal

which served as a record of the personal events relating to the fieldwork; in its most useful form it served as an introspective tool so that the researcher could examine her personal reactions to the data that had been collected and assess the potential effects that these reactions may have on the interpretation of the data.

The Ethnographic Interview

The ethnographic interview is a systematic series of interactions with informants. The researcher guided the informant or the subject so that he/she shared that information which best yielded cultural knowledge. Prior to the initial interview, the researcher explained the research project, the method of recording the interviews and the proposed structure of the interviews. Finally the informants were interviewed. The researcher asked for descriptive information, information regarding the relationship of certain concepts, or information regarding the meaning of various concepts. Questions and stems of questions were framed in such a way as to promote disclosure, clarification, and verification. In addition, the researcher utilized Agar's (1980) suggested strategies for posing ethnographic questions: (a) utilizing local (group) frame of reference for valuing concepts, (b) asking the informant about the scope of the issue/concept/problem as he/she viewed it, (c) attempting to understand linguistic linkages related to the semantics and logic existing within

the group, (d) asking the informant to compare and contrast concepts, (e) utilizing "frames". (Frames are statements with "holes" in them that can be filled in various ways by the informant. The researcher used frames to validate the research assumptions and conclusions.)

The following is a list of the constructs utilized by the researcher in order to initially frame the ethnographic questions: health, mental health, occupational health, stress, occupational stress, work-related health, work-related stress, personal experience of health, group experience of health, personal experience of mental health, adaptation to mental ill health, adaptation to stress, adaptation to work-related stress, resources for coping with ill health, resources for coping with mental ill health, resources for coping with work-related ill health, and resources for promoting health. The responses from these questions allowed the investigator to ask more questions which assisted her to more fully understand the constructs as they are being described by the informants. Informants were asked to verify, clarify, and evaluate the perceptions of the investigator in subsequent interviews with the subjects and informants. During the data collection period, each nurse was interviewed formally three times: once near the beginning of the data collection period, once in the middle of the data collection period, and once near the end

of the data collection period. However, during the data collection period the researcher had many opportunities for informal interview situations with each informant.

It is estimated that each informant spent approximately one to one and one half hours per week with the investigator in a formal purposive interviewing situation. The first interview focused on gathering information relating to the background of the participants, including a brief career history, the reasons for choosing nursing as a profession and how they came to be in their present job situation. The second formal interview focused on uncovering and/or deriving definitions and meanings for the principle constructs being studied. The third formal interview was used to validate impressions and amplify interpretations.

Setting

Grenfell Regional Health Services (GRHS) operates fifteen nursing stations, four hospitals and a community health centre in Newfoundland and Labrador. Grenfell Regional Health Services has described its health care delivery mandate in the following "Statement of Mission" (1982):

1. to assist in the provision of health services to the people of Northern Newfoundland and Labrador;
2. to support the continuation of health services begun by Sir Wilfred Grenfell and the International Grenfell Association;
3. to increasingly pursue excellence in health services work by a gratified and dedicated staff;

4. to do all other lawful things as are incidental or conducive to the attainment of the aforesaid objects or any of them. (p.3)

Grenfell Regional Health Services is comprised of divisions of community medicine, public health, dental health, as well as secondary and tertiary care centres in Goose Bay, Labrador, Churchill Falls, Labrador, and St. Anthony, Newfoundland. (For a complete organizational chart of Grenfell Regional Health Services and the divisions of community medicine and public health, refer to Appendix B).

Health care programs administered by Grenfell Regional Health Services in isolated communities are delivered from nursing stations or health centres. Typically, the physical layout of a nursing station includes clinic areas, treatment rooms, utility and supply rooms and living accommodations for nurses and guests. A nursing station can be staffed by as few as one or as many as six nurses, depending on the size of the community. In the Grenfell system, the nursing stations themselves are operated by the Division of Community Medicine, and are staffed by primary health care nurses, each of whom has the title of "regional nurse"; one of these regional nurses is designated nurse-in-charge or "regional nurse II". In most communities, sharing the facilities of the nursing station, are nurses employed by the Division of Public Health each of whom is titled "public health nurse". This researcher chose to investigate a nursing station in which one regional nurse and one public

health nurse work. These nurses are responsible for providing health care to the entire community, without the presence of a full-time physician. Health care is provided through community health and medical treatment clinics. Depending on the condition of the patient, and his or her health care needs, a patient may occasionally have to be admitted to the nursing station for an overnight stay until the patient is well enough to be discharged, or the patient's health status warrants evacuation to an appropriate health care facility. (Such an evacuation is colloquially termed "medevac"). The regional nurse is primarily responsible for diagnosing and managing health problems and performing minor laboratory procedures (Graydon & Hendry, 1977). The public health nurse is primarily responsible for preventative health programs such as education, immunization, health screening, and home visiting.

Areas served by nursing stations across Canada have predominantly aboriginal populations. In the Grenfell system, this is not necessarily the case, although nursing stations in many parts of Labrador serve populations which are predominantly native. In Labrador, community populations include an ethnic category known as "white settler", a group which had its origins in the 18th and 19th century mixing of Inuit and European ethnic groups. In many of these communities, the economic base is hunting and

fishing, with a focus on supporting the family from the yields of nature. The community will be henceforth referred to as Tunganiksavik, and certain facts in this report will be disguised in order to avoid an exact identification.

Tunganiksavik is situated on the north coast of Labrador. (For a map of Labrador, refer to Appendix C). The whole of the Labrador coast was originally inhabited by Inuit. In the mid-nineteenth century, a small settlement at and near Tunganiksavik was established, and a Moravian mission established in 1898 gave the community central status. In the 1940's, major movement to the community began, and in the late 1950's families from other coastal communities were encouraged to move to Tunganiksavik (Bendor, 1966). At the time of this study, it had a population of approximately 317 people. There are presently approximately fifty settler families and twelve Inuit families in the community. English is commonly spoken in the community, although Inuit families have retained facility in Inuktitut, the Inuit language. The major economic activities are seasonal; they include hunting and fishing, as well as seasonal employment at the fish plant. The community is considered to be economically fortunate and relatively free of severe social problems (LeFort, 1979). The community has electricity, running water and sewage, scheduled and frequent airplane service, as well as a government-owned grocery store, a post office and a

community hall. When the coast is free of ice in the summer and fall, a coastal boat with freighter and passenger service visits the community every two weeks.

The nursing station is located in an easily reached, but not centrally located area of the community. The nursing station itself is spacious, with living quarters for one nurse at the rear of the building. (For a plan of the nursing station, refer to Appendix D.) The clinic portion of the station contains a central examining room and office for the regional nurse, a smaller office and examining room for the public health nurse, an emergency treatment room, a dental office, an in-patient area, a small laboratory, storage rooms, and a waiting room. The living quarters include a kitchen, dining room, and living room, a bedroom, and a guest room. The living area is reached from the clinic by a short hallway. The kitchen and living room are also used by clinic staff as a coffee room and lounge. The clinic relies on the community power supply, but has an auxiliary generator for emergencies. Oil-powered furnaces produce heat and hot water, and the supply of water is plentiful.

In 1979, the number of outpatient visits to the nursing station in Tunganiksavik numbered 3890 (Lefort, 1979). Twenty-three patients were admitted to the nursing station for a total of fifty-nine patient days. In the year preceding this study, outpatient visits numbered 2996, and

fifteen patients had been admitted to the nursing station for a total of thirty-three patient days. In addition to the two professional nurses, the Division of Community Medicine employs an untrained nursing assistant, a housekeeper, and a maintenance person to support the professional staff.

Informants

Pseudonyms will be used to identify all of the informants. The two major informants were the regional nurse, who will be referred to as Margo, and the public health nurse, who will be referred to as Pauline.

Margo is a thirty-year-old registered nurse with a baccalaureate degree in nursing. At the time of the study, she had been working at Tunganiksavik for several years. Margo had worked as an outpost nurse in the Northwest Territories prior to assuming her position in Tunganiksavik. Pauline was a registered nurse, a graduate of a diploma program in nursing, also thirty years old, and had been working in Tunganiksavik for one year. Her previous nursing experience had been in a busy hospital in a large urban centre.

Another key informant was Dottie, the untrained nursing assistant. Dottie had been born and raised in Tunganiksavik and had worked at the nursing station for many years.

Additional information was gathered from the maintenance and housekeeping staff of the nursing station, as well as members of the community.

Ethical Implications

It is not believed that the subjects gained any immediate benefit from the presence of the researcher; however, it is hoped that the knowledge gained from the research will shed significant light on occupational health issues for nurses working in this setting.

The degree of inconvenience to the subjects was minimal. The researcher lived in the nursing station, but in a room well separated from the living quarters of the regional nurse whose home was in the nursing station. An effort was made to be as unobtrusive as possible in observing the nurses and their behaviour. Data collection occurred primarily during working hours. Any information that was collected outside of working hours was used only with the specific permission of the participants. The participants, on a few occasions requested that certain information be kept "off the record" and this request was honored. Only selected patient care situations were observed, and this was done with the verbal consent of the patient involved. In larger situations, such as the observation of traffic patterns in the clinic waiting room, or social functions, the researcher was introduced as "a

nurse doing research on the nurses", the irony of which did not escape many of the residents of Tunganiksavik to whom the researcher was introduced. Potential subjects were informed of the researcher's interest in conducting research through a letter from the Director of Nursing for Community Medicine. Written, informed consent was obtained at the commencement of data collection.

The name of the community in which the investigation took place will remain confidential, as will the identity of the participants.

CHAPTER IV

DATA ANALYSIS AND PRESENTATION

The Process of Data Analysis

The process of data analysis in the ethnographic method is not relegated to the end of the research, but is carried on all the way through data collection. As data were recorded, the researcher examined the data and identified (a) the need for validation of impressions and confirmation of already gathered materials and (b) areas that required further data analysis.

The first step in data analysis was the transcription of field notes. Field notes were transcribed and coded in order to identify the dominant words, phrases, trends, concepts and categories, which emerged from the data.

From the earliest days of data collection, the nurses seemed very eager to cooperate with the researcher, and accepted her presence in their professional and personal lives with relative ease. In early observations of the nurses, they readily shared their feelings about situations which were obviously frustrating or stressful. For example, on the first day of data collection, Margo left the clinic area and found the researcher in the living quarters of the nursing station. With an exasperated tone in her voice she stated, "You want to know about stress? I'll tell you all about stress!" and proceeded to share both the nature of the event and its effect on her. Normally, however, many

questions were asked of the informants during or after an event, and if necessary, the nurses and the researcher reviewed events days or even weeks later. As the researcher became more familiar to the nurses, more and more thoughts were shared spontaneously. In addition, the nurses frequently asked the researcher to join them in recreational and social activities.

While each nurse openly admitted frustration with certain aspects of her work from the earliest stages of data collection, each nurse voiced basic satisfaction with her role. As a nurse with previous experience working in an isolated setting, Margo was able to compare her present work situation with a previous one, and she had given her outpost nursing experiences much thought, which she shared with the researcher. Pauline, the public health nurse, had no previous experience in an isolated setting, and so often compared her role to that of a nurse working in a hospital. Even though she verbally expressed satisfaction with her work, it soon became apparent that Pauline was experiencing chronic work-related stress, and she eventually began to share much of her frustration. It became clear that each nurse experienced work-related health issues in a different way. So while each nurse shared some common responses to her environment and her work, the researcher found it necessary to focus increasingly on individual reactions to similar situations.

The researcher attempted to identify the characteristics of the phenomena as observed and learned from the informants. Using the framework suggested by Field and Morse (1985), the researcher noted:

- (a) the kind of events that were going on in the context being studied,
- (b) the forms a phenomenon, event, or concept takes, and
- (c) variations within a phenomena, an event, or concept.

Classification systems were then developed in order to "create an orderly framework for analyzing data" (Field & Morse, 1985, p.104). The researcher identified relationships between categories. From these relationships were derived some general propositions which were used as a basis for further data collection.

During data collection, the researcher observed a variety of events. These events included morning conferences between the nurses and the nursing assistant, nurse-patient interactions in the clinic and community health setting, telephone and direct interactions between nurses and physicians, emergency call-back situations handled by one nurse or both nurses, outdoor and indoor recreational activities, interactions between nurses and their supervisors, and interactions between patients and their families. In the first two weeks of data collection,

many key concepts began to emerge from the data. These concepts were arranged into two broad categories: emotions which the nurses experienced frequently in relation to their work and issues that affected their relationship to their work. Initially, nurses rarely discussed and few observations were made about their physical health; rather, the nurses focused on psycho-social issues.

1. Frequently experienced emotions. Both nurses experienced the following emotional responses to work situations: frustration, conflict, anger, cheerfulness, annoyance, self-confidence, self-doubt, concern, anxiety, fear, guilt, power, powerlessness, security, insecurity, isolation, withdrawal, stress.
2. Issues affecting the nurses' relationship to work. These issues initially emerged as non-equivalent sub-categories that would later be differentiated into internal and external variables affecting work-related health. These issues included: responsibility, relationships, professional values, privacy and personal space, stress, weather, danger, organizational hierarchy, power, liability, support and affirmation.

As these concepts emerged from the data, the researcher attempted to do two things: place the nurses emotional responses to their work into a context of work-related

experiences, and give the emotional responses meaning in the larger construct of occupational health. For example, when the regional nurse stated that she discouraged visitors from staying at the nursing station, the researcher asked questions about how she felt when there was a visitor in the nursing station over night, and if it affected how she felt about her work either at the time that the visitor was present or later, after the visitor had left. As data collection proceeded, it became clear that the public health nurse's emotional responses to work were often mediated by her sense of confidence in her ability to perform the tasks required of her. The public health nurse frequently expressed satisfaction with certain aspects of her work role, but experienced anxiety when called upon to perform some tasks repeatedly for which she did not feel she was prepared. The researcher then focused questions and observations on the nature of the tasks about which the public health nurse was insecure, attempting to isolate a key variable, and match that variable with the nurse's emotional response to her work role. In addition to questions and observations, the informants were asked to differentiate their responses to work situations by completing structured sentences such as: "I feel alone when I _____", "I feel satisfied with my job when

_____", "Being 'stressed' is like
_____", or "Being 'sick' is the same as
_____".

Variables affecting the nurses' response to their work were initially organized into four major categories: (a) role-related factors such as role functions, structure, responsibility, and relationships, (b) social factors such as relationship with the community, (c) factors related to the physical environment, including geographic features and workplace, and (d) internal variables such as job satisfaction, experience, physical health and coping styles. Because both role-related factors and community relationship factors tend to derive their meaning from shared social experience, these factors can be considered to be external in nature. The first three categories can therefore be organized under one larger category of "external variables". The findings of this research will be reported using a framework of occupational health that includes predominantly external variables such as physical environment, role structure, role responsibility, and role relationships, and predominantly internal variables such as job satisfaction, stress, and coping.

External Variables

The variables affecting occupational health which were not a direct function of the nurses' intrapsychic processes will be reported as external variables. These external variables include geography and climate, work environment, role structure, role relationships, and role responsibility. It is important to note that even though these variables are classified as external variables, they exert influence on and interact with the informants' internal, intrapsychic processes. Therefore they are more accurately considered to be "predominantly" external; that is, these variables exert their influence in a mainly social and environmental context.

Physical Environment

Geography and climate. Labrador is the name given to that part of the Canadian north located to the east of Ungava Bay and to the north of the Gulf of St. Lawrence and the province of Quebec. Navigation ceases in October and does not resume until June (Ben-Dor, 1966). Winters on the Labrador coast can be brutal. During the period of data collection, the temperature averaged -25 degrees Centigrade and there were several blizzards which halted air transportation. When the weather was uncomfortable or severe, Margo confided,

It's very easy just to stay inside. There's no need to go anywhere...It's almost like it compounds itself: if it's not in your routine to go outside, then you stay inside, and going out

becomes an event...Much of the time the weather is too cold to do anything outside that would be pleasant.

During the period of data collection, there was a seven day delay in evacuating a patient who had suffered a potentially serious head injury due to continual snow, blowing snow and poor visibility. Weather of this nature was referred to as being "down" or "out". The unpredictability of weather in Labrador created occasional feelings of powerlessness in the nurses.

If there is an emergency and you can't get out, and its a life and death situation, then you feel powerless...I don't think about it all the time, I just accept it, but when the weather is bad I want it to clear up, so, for example, I can get this person out.

Later in the data collection period, the regional nurse was to report feeling constrained by her physical environment. She did not like cold weather and felt that it restricted her choices in relation to: (a) recreational activities, (b) personal travel to and from the community and (c) patient care. Of these three limitations, she was most immediately affected if a patient's health was jeopardized when it was impossible to have the patient evacuated to a larger health centre.

At the time of data collection, the physical environment of Tunganiksavik was a pleasant one, with rolling hills, sparse evergreens, and a seemingly endless, frozen harbour. Residents moved about the community and ventured out "on the land" in snowmobiles. Patients who

required evacuation by stretcher were transported on top of a komatik, or Inuit sled, a device towed behind a snowmobile and normally used for transporting people and supplies.

Work environment. The clinic area was spacious (Refer to a plan of the nursing station, Appendix D). On the first day of data collection, there were no patients in the waiting room at 1100. The researcher was shown to the living room; it was a comfortably furnished room with a view of the bay. The regional nurse, Margo, came into the room five minutes later, and greetings were exchanged. When questioned about the local resident's reference to the nursing station as a "hospital", Margo stated "That's usual, but I hate that. I try to say: 'it isn't a hospital, it's a nursing station' but it's no good". Although this label was well entrenched, Margo resisted the implication that the nursing station offered the same range of services as a hospital, although it was not clear if the people of the community intended to make this comparison. The public health nurse, Pauline, arrived to exchange greetings a few moments later.

Pauline later revealed that she had been, on several occasions, prevented from leaving the community for a short holiday due to bad weather, and she recalled that she had been visibly upset whenever this occurred. During one particular situation, when the nurses were waiting for the weather to lift so that a patient could be evacuated by

plane, the scheduled service began operating before the Grenfell plane. The nurses were very frustrated. "That's (the scheduled service) for you. I never give up on (the scheduled service) unless they say they're not coming. They're so unpredictable. I do get upset about it, but you can't change it ".

In Tunganiksavik, the regional nurse lived in the single living quarters that were attached to the nursing station, while the public health nurse lived in the community with her husband in private accommodation. Margo stated that her living arrangements affected her only "in a passive way...living and working in the same building, for example." The hazards of this arrangement were obvious. People frequently called on the telephone to ask about clinical problems at mealtimes, assuming that because the nurse was in the building, she was available to fulfill her work responsibilities. This living arrangement also caused another problem. Normally, when the public health nurse was on call, she would leave a taped message on the telephone answering machine at the nursing station, indicating that the caller should contact the nurse at her home. In the event that a patient did not call the clinic before coming to the nursing station, the regional nurse was forced to let the patient into the clinic. In some situations, if the patient required immediate attention, the regional nurse, who was, strictly speaking, not "on-duty", needed to assess

the patient, render care, and only then inform the public health nurse that she had a patient at the clinic. There was, in this situation, real interruption of the nurse's "time off". In the words of Margo, however,

There are so many advantages to living in the same building that I try to minimize the negative things.. For example I only pay one third of the rent, I don't have to go outside on bad weather days to go to work, but I still get irritated by these little things.

The public health nurse and the nursing assistant both used the dining room, a section of the living quarters, as part of their work space. They frequently sat together to prepare reports and write letters. The regional nurse stated that she did not like this, but at the same time, recognized that it was hard to prevent, as there was no other lounge area for the staff. Margo felt that because the dining room was part of her home, its use should be kept essentially separate from the work situation. Physical layout and convention contributed to a clouding of this distinction, however. Pauline, too, recognized the potential problems:

I work at the dining room table for a change of scenery...sometimes I want someone to talk to, or a coffee. I think that it should be changed-we should have an area where we can have coffee, and (Margo) and I have talked about it I can see where it would get her upset, but we've been doing it a long time so it would be hard to change.

The regional nurse, while appreciating the space and relatively efficient functioning of the nursing station itself, suffered a loss of privacy and some inconvenience as

a result of living and working in the same building. These inconveniences were not major factors in shaping this nurse's response to her work, however the negative elements in this situation became part of the list of "little things" that became difficult to cope with in times of particular stress or, when added to a situation which exerted a major influence on her health status, created an additive effect which increased the nurses' subjective stress.

The nursing station served as a sort of "hotel" for physicians, specialists, and other visitors to the community. This is a common practice in communities along the Labrador coast, where public guest facilities are limited. Margo disliked this practice and tried to discourage people from staying at the nursing station:

When someone new calls, like the social worker, I suggest that they stay at one of the boarding houses in town. I just don't like having strange people around. If I know them socially I don't mind. But it's an intrusion. This is my home.

In a related event, the researcher, Margo and Dottie were sitting in the living room of the nursing station at 0830 having morning coffee, and a man who was totally unknown to any of those present walked into the living room. It was the furnace repair man from Goose Bay: the nurses had not been informed of his arrival. Margo casually looked at the man, observed his tool box and appearance and guessed his identity at once. She accepted the visitor with apparent calm, appearing to ignore the fact that a complete

stranger had walked into her living room. In effect, however, this event was an example of the type of unplanned intrusion which she did not appreciate, but to which she had learned to adapt.

Role Structure

As regional nurse, Margo's principle role functions included diagnosing and treating illnesses, monitoring the progress of patients with chronic health problems, providing emergency medical treatment, referring patients to medical specialists and organizing specialist visits in the community. On the first day of observation, at 1100 hours Margo had the appearance of being rushed, but not disorganized, as she prepared ticket vouchers for patients being transported to the Goose Bay Hospital for medical appointments. As well, when a patient in the community was ill, Margo considered it her responsibility to visit the patient, make the appropriate diagnosis and arrange for treatment. Also included as part of Margo's functions was collecting blood and other samples to be sent to the hospital in Goose Bay for analysis (although simple blood and urine analysis could be done in the nursing station) and refilling prescription medications that either she or a physician had prescribed for a patient.

Pauline, the public health nurse, was primarily responsible for preventative health care in the community. She conducted well-woman, well baby, and antenatal clinics;

she visited patients at home in order to assess family development and health status; she conducted the school health program. In addition to these functions, Pauline was very active in teaching programs developed by agencies such as the Red Cross. On a typical day, Pauline could be found doing any one of these functions. Normally, however, she worked out of her office/clinic room in the morning and made community visits in the afternoon.

The responsibility to provide twenty-four hour emergency health care required that each nurse spend a portion of her off-duty time "on call". Being "on call" meant that the nurse had to be available to cope with any emergency health care need that a patient or group of patients presented to the nurse. This service was the responsibility of the Division of Community Medicine and its employee, the regional nurse. In Tunganiksavik, "on call" duties are equally shared by the regional nurse and the public health nurse. Equal sharing of "on-call" duties with the regional nurse is an expectation of the public health nurse, but not strictly delineated in her job description. For the public health nurse, the implications of sharing "on-call" duty were significant: for fifty per cent of her off-duty time, Pauline, an employee of the Public Health Division, was actually working for the Community Medicine Division as a regional nurse. These two nurses had

established a one day on, one day off system for assuming on-call duties, and every second weekend, for each nurse, was an off-duty weekend.

A typical day in the nursing station in Tunganiksavik was organized in the following manner. Margo, as the regional nurse, worked in the clinic proper, seeing patients who presented with specific medical problems, or following patients who had chronic health problems. Margo's regular hours of work were from 0900 to 1700. An appointment system was not followed; the patients were seen by the nurse on a priority or first come, first served basis. Patients were free to make special arrangements to visit the nurse at a specific time, and often did. People in the community were not accustomed to an appointment system. Margo felt that the majority of community members did not "abuse" clinic hours; that is, they generally conformed to the expectations of the nurses to come to clinic during established clinic hours, and normally restricted after hours visits to emergencies.

Lunch hour was usually taken between 1200 and 1300 hours. Margo usually sat down for her lunch at noon, and ate in the living room of the nursing station. Typically, however, she was forced to abandon her lunch hour to perform work-related tasks; on one particular day, she had to confirm the whereabouts of the Grenfell plane (often referred to as the "mission plane") in order to ensure that

the patients who were travelling to the hospital that day could be told when to go to the airport. On this day, Margo made five telephone calls, consuming fifteen minutes of her lunch hour: one call to the hospital, one call to a nursing station in a neighboring community, one call to each patient involved, and one call to the maintenance worker whose task it would be to take the patients to the airport. Pauline, the public health nurse, married and living in her own home in the community, usually went home for lunch.

Margo attempted to regulate her personal time, but she found this to be a difficult task. She frequently received telephone calls during the lunch hour. If the matter was a pressing one, such as patient transportation, she attended to it, but if a patient called and it was not an urgent matter, she gently asked the patient to call back during office hours. It was true that occasionally there were differences between the nurses and community members as to what constituted an urgent health matter, but these were rarely observed during this data collection period.

Each nurse was free to structure her day as she wished, and this was a feature of outpost nursing that both nurses appreciated. Stated Margo: "If I get up in the morning and I decide that I don't want to work until ten o'clock I can do it if there are no patients." It was possible for both Margo and Pauline to do this because each nurse's actions did not directly affect the actions of the other. This was

not always the case when more than one regional nurse ("clinic nurse") worked in a nursing station, stated Margo. "When I worked in (another isolated community) you didn't do that as much because it seemed that you worried about what the other nurse thought. There was certain flexibility, though, even there."

Role Relationships

Relationships between the nurses. One of the earliest observations made was that of the relationship between Margo and Pauline. This relationship was described by Margo as "friendly". The two nurses were frequently seen together, often consulting on patient care issues. On one occasion, Pauline was preparing an health information sheet for distribution in the community. Pauline asked Margo to read the information sheet over so as to verify the accuracy of her information and suggest improvements or changes. Stated Pauline,

We bounce ideas off each other and complain to each other. If I want (sic) an idea, I can bounce it off Margo if she has the time. Of course, lots of time she doesn't have the time...she's very busy. We're not buddies outside of work, but our working relationship is fine.

Although each nurse verbally expressed satisfaction with her relationship with the other, these two nurses rarely interacted with each other outside of work hours. Margo stated that there were occasional differences between herself and Pauline. For example, on the mornings after the nights that Pauline was on call, Pauline normally arrived at

the nursing station at 0830 (her hours of work are 0830 to 1630) and turned off the telephone answering machine. This action left the telephone line open for Margo to answer. However, Margo's hours of work were 0900 to 1500. She stated that she felt that she was essentially "on call" (every day) from 0830 to 0900. They were unable to resolve this problem. Another conflict took place whenever Margo was eating breakfast in the kitchen at 0830, and Pauline arrived at the station after a weekend off: Pauline would use this time to give Margo a report on the patients that she had seen in the clinic over the weekend. Margo stated that she resented this, because she wasn't "on duty" yet. Margo eventually decided to "hide out" in her bedroom until 0900.

On many occasions, Pauline reported to Margo every time that she left the nursing station to work in the community. Margo rarely reported her whereabouts to Pauline, although Margo normally did not leave the nursing station during working hours.

Margo stated that she had reported to work when she was ill because of a "guilt factor"; she felt "too guilty" to ask Pauline to replace her. In the normal course of events, if the regional nurse is unable to work in the clinic, the public health nurse is asked to work in her place. Stated Margo, "it would be different if she didn't do anything but she has a lot of programs to run". In these situations,

Pauline felt obligated to hold a "sick clinic", as she did not wish to compromise the health of some patients. In contrast, public health programs could be postponed without any immediate effect, stated Pauline. Margo stated that "I don't always feel that I can say 'I'm sick, can you cover for me?' When she doesn't offer, I just work. But maybe I should be more assertive and ask". The situation then, was that while Pauline expressed that she was willing to take over Margo's clinic role when Margo was ill, she rarely verbalized this directly to Margo and consequently, Margo sensed a lack of support.

Pauline confirmed to the investigator what was suggested by observation: the public health nurse's role did not have the same power as the role of the regional nurse. That is, while the Grenfell organization, the regional nurse and the public health nurse clearly supported a philosophy of preventative health care and believed in the complementarily and equality of roles, functionally, these roles were not equal. The public health nurse needed to refer to the regional nurse in many matters relating to the physical operation of the nursing station, as well as consider the regional nurse her "boss" when she was on call; these factors led Pauline to conclude that as public health nurse she did not have the same status as the regional nurse. She sensed that this view was essentially shared by

the Grenfell organization, as most of her view of her status had been derived from information given to her by her supervisor.

It's natural for Grenfell to think that public health isn't as important as clinic work. They don't see it because it isn't as immediate. If patients don't get looked at in clinic, it's pretty obvious that they get sicker. But if we don't do our work, then it might take a month or year for the effect to be noticed. I've never considered myself to be less important.

There were struggles between the nurses to determine which nurse would assume different patient care responsibilities. Certain patient care responsibilities, such as the well woman clinic, the post-partum examination, and the pre-school physical examination, were not clearly the domain of either the public health nurse or the regional nurse. These tasks were shared differently in other nursing stations along the Labrador coast. The blurring of public health nurse and regional nurse roles, was partially related to the history of the clinic. For many years there had been only one nurse in the community, who assumed the total responsibility for all types of health care. Occasionally the nurses debated which one of them would visit a patient who had called and required a home visit. Final decisions were made jointly, based on any familiarity with the patient one of the nurses might have had, rather than the category of patient need or nursing intervention the patient may have required. The debates were sometimes tense but not angry. Pauline stated:

If I'm busy and I can't give someone's needle because I'm out doing a home visit or I'm sick, Margo will do it. If there's a call and someone is too sick to come in, then that's her responsibility, but sometimes it's mine.

Although the nurses were required to debate these and similar issues almost daily, they made no attempt to set consistent guidelines to govern task differentiation and task assignment. Each had her own opinion as to how the tasks should be divided, but, according to Pauline:

It's better this way because it would be too difficult to have it set out rigidly...In a job like this you have to be flexible...Most nurses work it out to some satisfaction, but a lot of public health nurses (in the Grenfell system) aren't satisfied.

Even as she stated this, she implied that she was somewhat dissatisfied with the uncertainty of her own situation.

Relationships with the medical staff. Each division, Community Medicine and Public Health, had its own Medical Officer of Health with whom the nurses consulted when necessary. When Pauline acted as regional nurse, she consulted with the Community Medicine physician; however Margo had little direct contact with the physician in the Public Health division. The nurses communicated with physicians by telephone. The frequency of these communications was directly related to patient care requirements. Margo communicated with the Community Medicine physician almost daily. There was some conflict evident in the two nurses' relationship with their Medical

Officers of Health. Conflict with the Community Medicine physician was often focused on the issue of patient evacuation or medevac.

When I'm arranging a medevac, although I'm the one here with the patient, someone else starts taking control. Three things can happen. The patient can walk in and I'm convinced that he needs to go, and I have to convince the doctor. The doctor says yes, as soon as I can arrange the medevac I can send the patient, or the doctor will say, well, maybe not and the doctor will list the things that need to be done, like set up and IV (intravenous therapy), and then they won't answer if I ask can they be medevaced. Depending on the situation, there may be a battle as to whether the patient should go out...This situation is very frustrating...it makes me angry to have to fight to get a patient out.

A particular event caused both nurse some concern. When a patient came in to the clinic with unstable angina, the nurses performed an ECG (electrocardiogram) to evaluate his condition. The nurses sent the ECG tracing via a scheduled flight to be interpreted in Goose Bay. The nurses waited to hear if the patient had suffered a myocardial infarction, requiring an evacuation to the hospital in Goose Bay. The physician recommended that the patient remain in the nursing station because his condition was unstable. While the inherent wisdom of the recommendation was obvious to the nurses, they were still uncomfortable in the situation: "if you can't transport the patient you should send the doctor up here to look after him. I haven't even got a monitor, I don't know how to look after the situation".

Both nurses expressed frustration when physicians, in their view, challenged both the nurses' patient assessment skills and attempted to impose on the nurses their view as to the disposal of patients. As in the situation described above, the nurses were clearly concerned about the welfare of patients and were responsible for rendering care directly to patients. In the situation described above, they felt that their skills were inadequate to cope with a seriously ill patient, but yet were unable to transport the patient to hospital or receive direct medical assistance. It was particularly frustrating for these nurses to be told to "do what you can". According to Margo:

It's one thing to say 'you do what you can' when someone is admitted to the station and it looks bad, but at a time when the situation is quite negative, you don't always think logically. I try not to think that this is a stressful situation and I'm being unreasonable because of it. But in trying to be reasonable, I often think that I'm being unreasonable.

In looking for medical assistance in some form, both Margo and Pauline were unwilling to accept that to "do what you can" was a reasonable suggestion. The axiom "do what you can" was frequently cited by physicians and supervisors, but it was an axiom not willingly adopted by the nurses.

When physicians could not recommend that a patient be evacuated, the patient was admitted to the nursing station. This practice, too, was a source of physician-nurse conflict. The nurses did not think that patients should be admitted to the nursing station for treatment in the same

manner as patients are admitted to a hospital with a full nursing staff. Margo felt that in an emergency situation, or a situation where the weather prohibited evacuation, a patient should be admitted. Given the limited resources of the nursing station staff, however, both nurses believed that patients should not be admitted for standard courses of treatment such as intravenous antibiotic therapy. The drain on human power and other resources is too great, the nurses suggested. Margo and Pauline felt that the medical staff did not understand this: "When a patient is admitted to hospital for treatment, there is a team of nurses ready and willing to provide the care. Here, there's only us". Margo and Pauline concurred that a patient who required treatment with intravenous medication over a course of time should be admitted to a hospital. In one situation that was particularly annoying for the nurses, a patient who had been seen by a physician in another community travelled back to Tunganiksavik. The physician phoned Margo and asked her to admit the patient for three days because the patient needed intravenous therapy.

He said 'would you mind doing that?' I said 'well, if you said it was for one day it would be reasonable, but for three days that's unreasonable and the patient should be in the hospital'.

Margo also expressed frustration with the physician in relation to a scheduled visit to the nursing station that occurred prior to the period of data collection. Community Medicine physicians, normally based in secondary or tertiary

care centres, made periodic visits to assigned communities. On his last visit, the doctor had been very rushed because of the volume of patients requiring his attention, to the point of telling Margo that he did not have time to see one particular patient. Margo expressed anger at the situation; she stated that she felt that "patients weren't getting the care that they needed". She had wanted to confront the physician with her anger, but at the time she did not.

Margo clearly did not like what she perceived to be a great deal of power in the hands of the medical profession in the Grenfell system. She attributed the physicians' power to the history of the Grenfell mission, to the fact that its chief administrator was a physician, and to the dynamics of medical care systems in North America.

Although Margo stated that there were some difficulties in her relationship with the Community Medicine physician:

We don't disagree that much...if it's something that I feel really strongly about I'll try and work around it by consulting another doctor who has seen the patient and then getting back to him. Or if I feel that he is asking me to do something and he doesn't know all the facts, I'll remind him of the facts.....

When acting as the regional nurse, Pauline used the Community Medicine physician in a direct consultative role. This was not the case in her relationship with the physician from the Public Health Division:

The situation isn't the same when I'm acting as the public health nurse. We have our guidelines and policies and they can suggest that we do things, but we don't have to follow their suggestions.

Pauline consulted with a physician when she was insecure about a patient care situation, but she admitted that the fact that a physician suggested a specific treatment did little to alter her sense of responsibility. She characterized her relationship with physicians as a complementary one, and one where ultimate responsibility was shared:

Once we phone him it's his responsibility...you more or less look at it as if he's helping you out. Once you've notified the doctor, if you don't feel comfortable with the advice that he has given you, you don't do it. The responsibility has become ours, and it's almost like a hospital. Just the same as in a hospital, you go along or you don't.

Pauline's sense of shared responsibility with the physician did not diminish her own responsibility, but allowed her to share the experience with someone else.

Margo was more assertive in her communication with physicians than Pauline. Even at this, there was much in her relationship with physicians that frustrated her, often on a daily basis, and in her frustration, evidence of a typical doctor-nurse "game" (Stein, 1967) emerged. Margo's relationship with the physician was normally harmonious, and in an observed situation, Margo decided to follow the suggestion of the doctor, even though she disagreed with it:

It won't hurt (the patient) and it will mean that what he has suggested has been done. It's not likely to make a difference and she's not going to get any sicker by tomorrow...she can't go out today anyway...It probably won't help but it won't hurt.

The regional nurse's relationship with the community's designated physician was not the same as her relationship with medical specialists. Her contact with medical specialists was much less frequent, and on the occasion that there was a visit to the nursing station by one particular specialist, both nurses were clearly deferential to the physician in patient care matters, in a manner totally unlike their relationship to physicians more familiar to them. While it was not uncommon for either nurse to argue with a physician, an argument with a medical specialist over a patient care issue was never observed, and by report, a rare occurrence.

Relationships with the community. Margo displayed visible emotion when she recounted her early experiences with the people of Tunganiksavik: "When I first came I had a feeling of adventure and I wanted to meet and socialize with people in the community". Initially, Margo's view was that she should attempt to become integrated into the community, and establish a social pattern for herself. Pauline had moved to the community with her husband and had begun establishing relationships with community members as a unit with her husband. Both Margo and Pauline attended community dances and private parties, mixing with local residents in

social settings. People in the community initiated conversation with Margo and Pauline spontaneously whenever they met in the community. Patients called the nurses by their first names, and nurses called the patients by their first names, often using the local forms such as "Uncle Bert" or "Baby". At least once a week, a local resident would visit Margo at the nursing station in a social capacity. Margo and Pauline attended and participated in sports events. For Margo however, the appearance of social integration was superficial:

Now, I realize that there aren't very many people that I have anything in common with. I used to go to parties where everyone was drinking and I would just accept it. But now when I go to drunken parties I take a harsher view of things because I know the dirt and garbage that's going on behind it...I just know too bloody much.

The role of "nurse" made these nurses privy to many of the contentious issues in community and personal relationships, to the point where this knowledge constrained the nurses' ability to interact socially with an individual, or at least, to do so comfortably. Interactions with local residents at a local dance, for instance, were polite and friendly, but not intimate. Margo expressed some regret and guilt about this:

I know it sounds judgmental. I just don't have too much in common with the people here...It's not that I dislike individuals...Most of the conversations which you would consider meaningful are usually related to money, government and outsiders, and complaining that they're not 'giving us more'. So I don't find that very satisfying.

Margo developed her knowledge of the townspeople and their problems over a period of time and the more familiar the nurse became with the community, the harder it became to have intimate friendships with its people.

When Margo first came to the community she recognized that she would be naturally drawn to interact with other outsiders, who, in Tunganiksavik, were predominantly teachers. Her efforts to resist the inclination were not always successful:

It's interesting, but all of us outsiders, we all had the attitude that we weren't going to isolate ourselves from the local people. But as time goes on, the less we tend to associate with local people. When I'm with other outsiders I feel that I can discuss issues more comfortably with them. With the local people I can't do that, or so it seems.

Her withdrawal from the community into a pattern of social interaction with other outsiders was accompanied by some guilt:

A lot of people I like; they're good people and kind people but they're not the kind of people that I would visit for an evening. To say that nurses don't tend to socialize...are we expected to go out and do things that we wouldn't normally do anywhere else just because we are in a small town? I get the impression that there is an expectation...

Margo stated that she felt that this expectation was quite strong in the community. She realized that outsiders, especially nurses, were often accused of isolating themselves from the communities in which they live. Margo stated her position on what she considered to be an

unreasonable expectation: "The other outsiders feel a responsibility to mingle with the town and be a part of the town. But if it's not your personality to do so in the city why should you have to do it here?". The pressure to interact socially with the community was not applied by any source outside the community; no instructions or advice was given on this issue by the Grenfell organization. However, Margo stated "the people in town expect it..."

Pauline expressed some disillusionment with her relationship with the people of Tunganiksavik. Although she felt that her attempts to integrate were initially genuine, she felt that she was not accepted by the townspeople. The townspeople's initial curiosity about her identity as the stranger abated once she had established her identity as "nurse". Pauline eventually began to realize that her identity would always be that of the outsider-nurse, regardless of any intimate relationships that she may develop. The researcher experienced a similar phenomenon when she was introduced to various townspeople. Even though there was some curiosity about the nature of the research, the fact that she was a nurse seemed to be the primary identity that she was assigned. Margo was cynical about her own early desire to integrate herself into the life of the community.

As much as you may want to be a part of things in the town you're just another outsider. If you turn your back, someone will put a knife in it. You're just another nurse. Nurses come and nurses

go...you're just a part of the service, which is the way that nurses are looked at everywhere, except when you are the only nurse, it's different.

An especially painful incident caused Margo considerable anguish. During a meeting of the health committee of Tunganiksavik, when Margo was out of the community,

Two people brought up something that I had supposedly done or not done for some patients....people who were supposedly friends were nothing short of slanderous...people would prefer to cut me down rather than ask me something about the events that occurred...in fact nothing had been done wrong, but they didn't ask me about it.

She was hurt and angered by this event, and she described how socially isolated she began to feel: "I felt fear...fear of not being able to trust anyone in the community and what they were going to do to me next." This "we-they" emotion became very strong in this nurse. Initially, Margo generated an emotional defense: "I couldn't allow myself to feel hurt..that would have suggested that they were something to me that I wasn't to them and they've done this to other outsiders". In describing this event to the researcher, Margo attempted to understand what she perceived as a relationship that was broken and irreparable: "It's just their way. Maybe they can't express their anger and hostility to other people in the town and they take it out on outsiders...they assume that they're going to be gone anyway, and it won't matter." Even though the regional nurse had a positive view of the community as a politically

stable community, and felt genuine warmth toward most of the community's residents, she eventually found it necessary to socially isolate herself. The nature of this isolation became protective: it was partially an attempt to exert some control over her own social activities and partially a response to a negative and painful relationship with a few community members.

Generally, patients with a health problem who needed to see the nurse, arrived at the nursing station within established clinic hours, and conversed with each nurse in a friendly manner. One patient told the researcher that "the nurses here usually do pretty well..I think that it is hard for them though". Margo stated that she liked working in Labrador because "there are fewer politics here: "there isn't too much pressure from the people." Community members recognized that each nurse's role was different; occasionally the public health nurse was referred to as the "social nurse" and the regional nurse was referred to as the "sick nurse". However, community members considered these differences subordinate to the identity of "nurse". In cases of health problems requiring urgent attention, both nurses were responsible for call duty and community members did not appear to differentiate nursing roles in these instances. Some community members did however, express a preference as to which nurse they would rather visit. These

preferences seemed to be related predominantly to the interpersonal style of the nurse, rather than her formal role designation as public health nurse or regional nurse.

On one occasion, a patient was waiting in the clinic for approximately one hour. Margo was in the clinic with a patient who was ill and demanded her full attention. Pauline was not in the nursing station at the time. Although Dottie occasionally offered explanations to the patient as to why he was unable to be seen (to which he nodded his understanding) he said "this is ridiculous" and left. He returned to the clinic later in the afternoon, and he did not express any anger or annoyance to the nurse directly. Because there was no appointment system; a patient occasionally waited several minutes or even hours to see a nurse. This was a problem of the no-appointment system, however, most patients stated that they wished to retain this system. On occasion a patient wanted to see a nurse for a specific reason and on these occasions, both nurses tended to make appointments so that they didn't have to "stand around all day waiting" (for the patient).

Margo's experiences nursing in another nursing station were a basis for comparison and insight into her present job situation. She had left the Northwest Territories because "basically it was hard to submit to hostility and the political turmoil". Margo had loved the natural environment and the nature of the work, but after two years, she decided

to leave. A specific incident precipitated her decision to leave. Members of the community wanted the nurses to medevac a sick child, and pressured them to do so, even though the nurses felt that the child did not need to be evacuated. Margo reported that the nurses had accepted the reality of political pressure and its relation to their work, but they could not accept what was to follow. Margo recalled that the nurses received a letter stating that:

We were to give them what they wanted...it doesn't matter what you know, it doesn't matter what your judgement is, because the people in the community were native you had to give them what they asked for.

It seemed to Margo that the organization was denying their capabilities and eroding their professional responsibility. This was intolerable to her. This issue, while related to the nurses' sense of professional control, was more importantly an issue of support and validation as professionals: "I couldn't accept that memo", Margo stated. "It was possibly an ego thing for us...someone saying that your opinion didn't count". The experience had affected Margo so much that she stated that did not want to work in an Indian community again.

Relationship to support staff and services. Each of the support staff in the nursing station had a clearly defined role. Of the three, Dottie, the nursing assistant, had the most power and was most highly respected by both nurses. Dottie's experience and acquired skill made her

invaluable to the professional staff. As a local resident, she had worked at the nursing station for many years, and supplied an element of continuity and consistency as nurses from outside of the community came and went. She assumed some of the responsibility for directing the other support staff, such as the maintenance worker and the housekeeper, although this responsibility formally rested with the regional nurse. At one point during the data collection period, one of the nurses was clearly distressed over what she perceived to be a "problem" in her relationship with Dottie. Such a "problem" (the nature of which the nurse never clearly determined and was never discovered by the researcher) was personally devastating to the nurse. The nursing assistant was regarded highly as a staff member, and affectionately as a friend. On the occasions when she was ill and absent from the clinic, much concern about her health would be voiced. She had access to confidential patient information, to which other support staff members did not have access. While hushed tones were used when the nurses discussed a patient in the presence of the other support staff, there was often a deliberate effort to include the nursing assistant Dottie in the conversation.

The regional nurse held the authority to direct the support staff, a situation which the public health nurse both liked and disliked. If Pauline had a particular problem in relation to her office facility, for example, she

was required to ask Margo to ask the maintenance worker to perform the repairs. As Margo was the regional nurse and responsible for the administration of the nursing station, Pauline was not supposed to ask for Dottie's assistance in patient care situations, unless she was replacing the regional nurse in her role. On the other hand, Pauline admitted that she was uncomfortable with authority and disliked directing people anyway. Margo assumed authority with apparent ease, and usually performed the associated functions, such as enforcing discipline, without hesitation.

Nursing station personnel relied on a variety of services to assist them in both rendering health care and maintaining the physical plant of the nursing station. For the nursing station at Tunganiksavik, laboratory and pharmacy services were centred in Goose Bay. Minor maintenance repairs could be effected by the station janitor, but any major repairs required a visit from persons centred in Goose Bay. Before telephone communication became possible, nurses along the coast communicated with physicians, support personnel, and each other via radio. The central relay centre for radio communications became known as the "R.T" (radio-telephone). Long after radio had been abandoned as a mode of communication with the nursing stations, the R.T personnel in Goose Bay retained some prominence in the lives of coastal nurses as a centre for air travel arrangements and scheduling, and movement of

goods. Although there was much nostalgia surrounding the use of the R.T. in the days before telephone links were established, at the time of data collection, Grenfell administration had decided to remove the radios from the nursing stations, as they were deemed obsolete. Nurses in Tunganiksavik did not agree with this action. It was not unusual for telephone communication to be interrupted, and the nurses felt that it was important to have another means of communication in the event of a failure of the primary method, the telephone. In objecting to this decision they were attempting to retain something which symbolized (a) a link to an outside world and support systems, and (b) professional identity and control in their lives.

Margo expressed frustration at what she described as "people not doing their job". On one occasion, she received a blood test report from the hospital laboratory via the Grenfell organization's internal mailbag (delivered on a contract basis by the regional air carrier). The results of the test indicated that the patient had a potentially serious health problem, and the delay caused by sending the results in the mail (rather than using the telephone to relay the results directly to the nurse) could have had a serious effect on the patient's health. This type of situation, Margo felt, was:

inexcusable...my work does depend on other people. There are very few people that I have to interact with on a regular basis who are responsible and efficient and what I can do really depends on

their actions. Everything usually relies on us chasing people around, and if other people aren't efficient....I would like for one of the people who has f_____ up on the other end to experience just a half and hour of being here with the patient who is really sick and for them to see what it feels like.

Margo's complaint of lack of efficiency in the organizational system was also demonstrated in the process of physical plant maintenance. During the period of data collection, the furnaces stopped working, a potentially hazardous event during a Labrador winter. Margo's frustration was evident as she questioned decisions made by maintenance personnel in relation to the repair of the furnaces. In this kind of situation, both of the nurses tended to become frustrated and communicated this frustration to each other and to their immediate supervisors. They felt, however, that they were relatively powerless to correct the problems. The nurses' physical isolation from most of the Grenfell system's organized structure of support services created a social distance from the support structure. In order to solve a problem, no matter how immediate the problem might have been, the nurses were forced to use long-distance communication and rely on people who either (a) were physically separated from the problem and unable to directly assist the nurses to find a solution until some considerable travel was undertaken, or

(b) were not particularly aware of or sensitive to problems as the nurses experienced them. These factors contributed to the nurses' sense of isolation from support personnel.

Role Responsibilities

Patient advocacy. The nurses' primary responsibility was to ensure that patients received what they believed to be the best possible health care. As primary health care givers, the nurses' scope of practice was larger than that of the mainstream nurse. In a particular event in which the patient did not receive what the nurses perceived to be the best possible health care, Margo took an action which she felt would be unpopular with the Grenfell organization. Her professional ethics dictated that she bypass the normal route of consultation with the community's designated physician, and she made contact directly with a specialist. This advocacy role carried with it some dangers for these nurses. As nurses with responsibilities to deliver health care within an organizational hierarchy, they were compelled to follow established organizational procedures, but both nurses sensed a very strong advocacy duty. The advocacy ethic was a strong one primarily because the nurses recognized that patients in Tunganiksavik had few options when it came to choosing care-givers, and as the only health care givers in the community, they considered it their duty to ensure that their patients received the best care possible.

Scope of practice. A major role function of both nurses is prescribing and dispensing medications. This is a function not normally performed by nurses in other settings, and a function for which neither nurse was educated. The nurses maintained the medication room in meticulous order, and when prescribing medication, frequently consulted the appropriate formularies, a pharmacist or a physician in Goose Bay. The accompanying responsibility weighed heavily on Margo, and even more so on Pauline. Margo discussed the issue of possible mistakes in prescribing and dispensing medications. When the researcher asked if mistakes were ever made, Margo indicated that she didn't think she had made any mistakes, although it was possible, she supposed. She did state that in her absence, a replacement nurse had made two serious drug errors and may have caused a patient's condition to worsen in doing so. She felt that if the nurse had been new in the role, the mistake might have been understandable, but as the nurse was experienced, Margo could only suppose that the nurse was careless or stressed. Margo felt that it was relatively easy to make an error as "it's so hard to find original orders on (patient) charts...you could be hunting forever". Pauline described similar emotions, and indicated that much of her contact with physicians was in relation to medication prescription. Ironically the anxiety of possible error caused the nurses to take great care to perform this role function accurately,

thus minimizing the possibility of error and avoiding the stress of discovering an error, correcting an error, or causing a patient harm.

Twenty-four hour responsibility. A dominant feature of the role of the outpost nurse is continuous visibility as a nurse, with a twenty-four hour responsibility to provide care to the community. The nurse's identity in the community was strongly linked to her identity as nurse. Margo resented the fact that when she was present at social events and someone became ill, she was required to act in her capacity as nurse.

People wait for me to do something..You can be standing around and someone may get drunk, vomit or hit their head and everybody looks at you to respond even though the person is saying don't touch me...I say 'well shit I'm not going to do anything if he doesn't ask me for help'.

In these situations, the normally private nurse-patient relationship became public, and this added dimension was borne uncomfortably by the nurses. The professional nurse is normally educated for a role which, in today's health care system, most frequently has a specific time structure. In this setting, the nurses had no such time structure, and the nurse only stopped being "the nurse" when she left the community. Likewise, when the nurse boarded a plane and returned to the community, there was an almost instantaneous effect on the sense of responsibility: "as soon as you get on the plane...in an area when there's no other medical personnel, you assume the responsibility of being the

nurse...". The nurses stated that in every case when they returned to Tunganiksavik after an absence, they felt "different": no longer "anonymous". In other words, as the nurses moved from a state of having no particular responsibility to a state of being totally responsible for all aspects of health care, they experienced a change in their psychological state that was both obvious and uncomfortable.

Obligation and duty. The nurses exhibited a strong sense of duty. They felt guilty when they could not appear at their place of work, even when events clearly prevented them from doing so. On an occasion when Margo had travelled to Goose Bay for a doctor's appointment, and been unable to return to the community because of weather, she phoned the nursing station daily and spoke to her replacement. She expressed guilt over her absence. This sense of responsibility was evident even when the nurses were ill or exhausted. Said Margo: "I have worked when I'm dangerous....when I'm so tired". The nurses recognized this aspect of their role as one of the unpleasant sides of outpost nursing, but the nurses were willing to accept this unpleasant side because they enjoyed their work and felt a responsibility to the community. Said Margo:

When you're sick you have to go to work. It's something that I've accepted and it's been my choice. It's hard to go to work when you are sick but because I've chosen to work in this role, I have to accept it.

As part of her commitment to the people of Tunganiksavik, Pauline felt obligated to provide a comprehensive range of services as part of her nursing role, and she often did so, sometimes reluctantly. Her reluctance stemmed not from a lack of willingness to work hard for her patients, but because she felt that much of what she was asked to do was outside of her nursing role, and beyond her level of competence.

When something happens I feel obligated to react...for example, social work or police work, if no one else is here to do it. Sometimes I wish that I didn't feel so obligated though...There was a situation where the social worker wanted me to make a visit to a person on parole and do some family counselling. I asked my supervisor and she said that if I felt comfortable doing it, I could do it.

Pauline proceeded with the family counselling, primarily because she knew that there was no one else available to do it. The nurse's actions were well intentioned, but taking action as a family counsellor caused her some anxiety.

In general...I think that I did help them...but I gave up on it because it was getting too much. Then when I gave it up, the counselling wasn't done any more. So sometimes if we don't do it doesn't get done.

The nurse's anxiety developed as a result of two factors: her perception that she had an obligation to intervene based on a demonstrated need in the community, and the fear of failing to be able to meet those needs. In another anxiety-

provoking situation, Pauline was forced to apprehend a child based on reports of child abuse, a procedure normally performed by the social worker.

I didn't want to take the child away from the family, so I phoned the RCMP. They said that it had to be a social worker, but it was Christmas and no one was going to do anything. I was left with the situation and the obligation.

At the time of this event, Pauline had been the only nurse in the community; she was essentially without her usual professional support systems. For Pauline to uphold the ethic of "doing your best" meant that she would have to act outside of her normal scope of practice, outside of the rule of law, and without the support of her own professional group and other community services. In this situation, a solution to the problem was found by enlisting the help of community members, but the process of coping with the event exacted its psychological toll on Pauline.

Margo defined her responsibilities more narrowly, and explained that in her view, Pauline's role was inherently broader:

I don't feel obligated in terms of the community...I think Pauline has a much stronger feeling because she is much more visible (as the public health nurse)...I'm seen in the clinic setting and her role is much broader.

Emergency health care. When the nurses finished their regularly scheduled working day, they were required to provide an emergency call service, a responsibility Pauline did not enjoy: "When you walk out in the city, someone else

will take over. Here, you're just going to get called out if there is an emergency." For Pauline, whose daily work did not consist of diagnosing and treating patient illnesses, taking on call duty or acting as regional nurse presented special problems.

I don't like being asked to cover clinic, because you don't know the previous stuff. If I was doing it all the time it would be different. For example, when I covered for Margo over Christmas, by the end of the month people were coming back with problems that I had initially seen, so I felt that I was getting used to it, and it was less stressful. But when you first go in and you don't really know the background, it's hard.

Nurses in Tunganiksavik experienced an average of about ten off-duty call-backs per week. In terms of actual hours spent in call-back duty, this was very manageable, even to the point where the nurses could socialize with their friends on the nights that they were taking call. However, being on call did represent an intrusion into the nurses' privacy, and affected their ability to plan their off-duty activities.

Internal Variables

As in the above reporting of external variables, the internal variables of job satisfaction, health status, stress response and coping styles should be considered as being "predominantly" internal. Although there is certainly a relationship between the external environment and the

effect of internal variables on occupational health, these variables exert an influence on the individual in a mainly intrapsychic context.

Job Satisfaction

Each of these nurses expressed a certain degree of satisfaction with her present work position. Each nurse came to choose her position in a different manner. Pauline applied for a position as a public health nurse for two reasons: because she "always wanted to be in public health" and because her husband had accepted a position in Tunganiksavik. Margo had previous experience in outpost nursing in the Northwest Territories and chose outpost nursing because of the independence and freedom that the role afforded her.

In comparing her experiences in Labrador with her outpost experiences in other regions, Margo stated that, because of a different political climate in the communities, nursing in Labrador was probably "easier" than in the Northwest Territories, and for that reason she was willing to accept a lower pay scale and an overtime package that did not compensate her as fully as she would have liked.

Although the responsibilities of her role were at times overwhelming, Margo enjoyed the challenges of the position:

There is a deeper sense of responsibility...you can use your mind, you can work independently...and make decisions based on your knowledge and when it works you can feel good....I

get a real sense of personal and professional satisfaction, but it's more personal because I've done it myself.

To be satisfied with one's work, stated Margo, is a very subjective feeling: "the events may be small and insignificant, and you may be the only one to perceive them as satisfying." To be dissatisfied is just as subjective, she added, and equally as difficult to observe or describe: "there may be a series of negative interactions or events, each one may be insignificant, but added together they make me feel dissatisfied". Margo's job satisfaction emerged from feelings of "accomplishment, victory, or reinforcement of self...it makes you feel good about your self. You've done something and your thoughts were confirmed and you were right in making your decisions". Margo was frustrated by events that on the surface, might seem insignificant: "like wasting time...trying to make planes, weather, seeing how many people can go on the plane, making phone calls and running around, just to get something petty done". These non-nursing functions, essential to both patient care and the smooth running of the nursing station, were a source of irritation to Margo, primarily because they gave her no personal or professional reward. In her role, Margo found herself in many situations where she felt unsatisfied. In one particular patient care situation, a patient presented at the clinic with non-specific physical complaints. As

this behaviour was not unusual for this patient, Margo felt frustrated at her inability to satisfy both herself and the patient:

If I don't know what's wrong with her and she's calling me on the weekend with a pain, and she's demanding a response from me...when I confront her with doubt, she does her typical...routine.

Margo considered this incident to be a "waste of (her) time", which was even more frustrating because the event took place on the weekend, and she was called back from off-duty time to see the patient. The nurse was also frustrated at her own inability to deal with the situation both as it occurred that day and on a continuing basis: "This is one of those little things that adds up". Dissatisfaction stemmed from both a blocking of patient care goals and a sense of hopelessness in a situation that wasn't likely to change.

Occasionally the nurses were unable to accomplish patient care goals because they were unsure as to what course of treatment to follow. An error in treatment was not necessarily a failure, in Margo's view. Even though making an error led to dissatisfaction with herself, Margo did not feel that making an error was completely without benefit. An error, if it helped her to cope more effectively with a future situation, could actually be a positive experience: "Anything that reinforces one's ability to make a decision, or a sense of who you are, is a positive experience." When she consulted with a physician, errors in patient care were often identified, she stated, because as a

more skilled medical practitioner, the physician makes more precise decisions about medical treatment: "with a doctor I feel like I don't know as much as he does. He should be able to make better discriminations." Margo was able to rationalize errors in treatment, although if an error was made, she readily accepted responsibility and felt a sense of regret if a patient had suffered. Errors in medical treatment decisions were tolerable to Margo; errors resulting from faulty or deficient nursing knowledge were not. Margo maintained high nursing practice standards for herself and her peers, and these high standards were an integral part of Margo's relationship to her work role. In order for Margo to be satisfied with her job and her job performance, she needed to perform her job well; and a crucial element of performing well was the achievement of a positive outcome for the patient. Margo described a situation in which she came to a conclusion about a patient's medical condition that was wrong. In terms of the potential consequences of the wrong decision, she "felt bad ...but I didn't feel bad that I made the wrong diagnosis because the diagnosis was fairly obscure". In this way, stated Margo, the error was not a failure, but the situation had some element of dissatisfaction because the patient's treatment was delayed. In Margo's view, treatment error was stressful because of its effect on the patient, but she clearly recognized her own limitations in relation to

management of certain health problems, and did not feel guilty when she made an unavoidable error. In situations where she expected herself to perform to a high standard, she experienced some guilt when she failed to perform well. Margo's ability to view a potentially negative event in a positive light was a feature of her personality that enhanced her ability to cope with the demands of her role, her level of job satisfaction, and demonstrated that she was relatively secure in her role.

Pauline believed that her work in Tunganiksavik had the potential to be very satisfying, but that it was not.

I tend to think negatively...there's a lot of rewards for teachers when they see the kids graduate. For nurses,...it's more seeing someone else get better and not get worse because of something you've done.

In her own view, her worth as a nurse in the community was dependent on achieving positive outcomes for her patients, or at the very least, not causing a patient harm. In many ways, this view was not so different from Margo's view. However, Pauline was not as satisfied with her role as Margo was. She liked her public health role:

In my own role I can plan and things are fairly predictable. Things do come up of course, but it's not like in the clinic. (The clinic) is certainly more unpredictable. That's part of the problem."

Her reference to the public health role as "my own role" was a clue to Pauline's feelings about the nature of her work. She was alienated from that part of her role as public health nurse that required that she take on-call duty and

treat emergency health problems. She derived much satisfaction from her competence in preventative health care and community education but did not derive very much satisfaction from that other aspect of her role.

During the period of data collection, Pauline was, in her own words, in the middle of a "difficult" year. Events such as an unexpected patient death had been personally traumatic for Pauline and challenged her coping resources. In one particular patient care situation, when Pauline was the only nurse in the community, a patient died as a result of multiple trauma injuries after numerous attempts to resuscitate her had failed. Pauline felt that the patient required medical intervention well beyond her capabilities, and indeed, beyond the capabilities of most nurses. Although she recognized that the patient had been, in all likelihood, beyond help, she continued to feel guilty about both her management of the patient care situation and its outcome. She asked the researcher to confirm that what she had done in managing the situation had been correct. Primarily as a result of this event, she required some time out of the community: "I had to take a week off. Even then I didn't feel like coming back, but I did--I'm here." This experience undermined Pauline's confidence in her abilities to manage emergency medical problems, and added to an already present anxiety about being on call, especially during the times when there was no other nurse present in

the community. Pauline needed to be able to control her work activities, and felt that when she was required to act as regional nurse she was unable to do so. To be responsible to provide emergency care was to be prepared for the unexpected and uncontrollable. This lack of control was a common theme expressed by both nurses: "we don't have any control here...not even fruit and vegetable orders, or planes...". On one occasion, when the researcher was visiting Pauline in her office, Pauline's frustration with her job was evident. As she was completing an overtime report she exploded: "I want my money! If you have to go through all of this shit, at least you want to get paid for it."

Pauline and Margo did not socialize together outside of work hours except on rare occasions. In her previous nursing position, Pauline had used her colleagues as a social outlet, and such an outlet was not available to her in Tunganiksavik. Pauline did interact with the nursing assistant Dottie outside of work hours, although by the end of the data collection period the two women were relatively more distant from each other. Pauline did not visit Margo, or come to the nursing station in a social capacity. Pauline did not like the lack of a large work group, although as discussed previously, the nurses act as a support system for each other.

The role responsibilities of these nurses were occasionally so overwhelming that they were often left with an immense feeling of isolation.

It happens when you're way over your head with medical needs. There's a fear that you have when you're bluffing your way along...being in a nursing station compounds it...In the city you're never alone.

For these nurses, being "alone" did not mean being without companions or friends; "aloneness" meant being without the resources and support systems they felt that they required to deliver the highest possible standard of health care.

Even when you're in the nursing station with other nurses, you're still essentially alone, because the other nurses are in the same boat as you are in terms of their ability to handle medical situations...there are some things that no nurse would be prepared for.

A sense of abandonment took many forms in the minds of these nurses. It took the form of someone not being able to find a plane to come and pick up a patient, or it took the form of a physician not approving a medevac. The nurses did not ever state that they felt abandoned by their nursing supervisors, however; to the contrary, they expressed that they normally felt quite supported by them. However most of their support systems were geographically distant from their place of work, and this distance influenced their effectiveness and occasionally left them feeling powerless. They tended to become frustrated in these situations, especially if patient care was affected.

If you work in a hospital and you order supplies that don't come, you can do something about that. Here, you can't do anything. If there is a whole bunch of these irritants, it's annoying...

The nurses knew that if the patient was very ill at the time of initial assessment, the patient's condition could easily have deteriorated by the time a medevac was arranged and the plane arrived in the community. If the delay was related to unavoidable elements, such as weather, then the nurses were frustrated but they could easily rationalize the delay. On one occasion the nurses were caring for a patient who was bleeding and hypoxic:

...I was frantic all night, and we couldn't get her out. If the delay is due to the weather, you have an awareness of that and you know that it's due to the weather. You don't have the feeling that you've been abandoned.

In situations where a human factor was responsible, however, the nurses felt that they had somehow been let down.

Coping, Stress, and Health Status

Although there were similarities in the nurses' responses to their work situations, each nurse identified the work life issues that most affected her, and each nurse experienced work-related health differently.

Coping styles

Isolation. Each nurse displayed a unique coping style. Margo tended to withdraw from, rather than confront social situations that were difficult. If she was unhappy with a particular situation in the community, she isolated herself

from the situation unless she was required to take a professional interest. In doing this Margo experienced some psychological conflict, as she recognized that as the regional nurse she was expected to be a visible member of the community at large.

I isolate myself....quite honestly, from mostly everyone in town. I socialize with people I do like which is normal, yet you're expected to show up for every social function. It's dishonest..

In effect, Margo created boundaries between herself and her chosen social group, and the rest of the community. For Margo, this had a protective effect; she was able to resist being drawn into community conflicts and affairs (unless she was required to do so as part of her role), and she could maintain some degree of control over her social life. To a lesser extent, Pauline also attempted to maintain tight control over her social activities. Pauline, however, lived in a house in the community, not in the nursing station, and participated in community recreational activities. In addition, she had a husband who was highly involved in the community activities. Pauline's public health role placed her in the community and outside of the nursing station, for most of her working day. For Pauline, then, social isolation was neither realistic nor desirable.

Control. In carrying out her daily schedule, each nurse exercised her own judgement as to how she should organize her time and her work, and this autonomy helped the nurses cope with work role demands. Margo usually attempted to

schedule a break period once in the morning and once in the afternoon: "On superbusy days and you're seeing fourteen or fifteen or twenty patients it gets to the point when your nerves are really jumbled and you need a coffee break". If Pauline was in the nursing station, she too scheduled break periods. If Margo became stressed by the day's events, she experienced tension and anger, and although she was adept at disguising these emotions, she occasionally took advantage of her break periods to relieve some of her tension, by talking with her co-workers. In addition, she confessed:

What seems to happen is that I yell at people.
Others don't always see it. Twice I have
apologized because I've felt that I've had an
outburst and people say 'what did you apologize
for?'

Pauline occasionally became overtly distressed at work. One morning during the data collection period Pauline was unable to go home for her lunch break because her supervisor had telephoned at the beginning of her lunch hour. She valued her time away from her job, with her husband, and her lunch hour represented a significant portion of that time. She was angry and tearful when she spoke of this event to the researcher. Although she quickly adapted to this temporary change of routine, throughout the day she continued to harbour some resentment toward a supervisor who had, in her view, robbed her of a period of time that she could normally expect to be free of responsibility. In addition, Pauline disliked staying at the nursing station beyond her normal

hours of work, because she felt that it compromised both her ability to maintain her home (by keeping her from home-making activities) and her desire to participate in community recreation activities.

If I stay here (at work) until 5 or 6 o'clock that's more difficult, that's stressful.. If I was living here (in the nursing station) and didn't have anywhere else to go I'd probably stay here quite happily until five or six o'clock.

Pauline utilized these tasks as coping mechanisms, and as such, they were important in helping her maintain her mental and physical health. Perhaps more importantly, Pauline valued control over her daily schedule, in order to assist her to cope with the many times her off-duty time was interrupted by unavoidable health care emergencies. Recognizing that she experienced emotional reactions to work situations, she revealed that while she had accepted her work situation she had not fully adapted to it.

Adaptation is one thing, but there's also just acceptance of the way it is. You cope and there's nothing that you can do...I only get worked up when too many things happen at once.

For Pauline, it was not only her work situation that required continual adaptation, but the potential hazards of a life in a harsh climate.

Recently at home, we thought, well, January's over, February's over, maybe we're going to get through the winter without the water pipes freezing, and then everything happens at once. The water freezes and I get upset.

She was caused particular distress when her relationship with her husband was affected by her work.

If I'm upset about work, then it affects him. If I jump when the phone rings, then he jumps too...there's not much you can do, just try and relax".

Pauline stated that initially, her husband had found it difficult to accept that her work role responsibilities occasionally intruded their lives: "I'd just get home and I'd be called back. He's getting better, he understands now." She believed, however, that her obligation to the community significantly affected their relationship, and that her husband was reluctant to accept the fact that, after her usual working day had ended, he occasionally had to share his wife with other people, especially when she was on call.

When I fill in for the clinic, that has a really negative effect on my husband. For example, over Christmas, if we had to cancel some plans, he got upset, and that bothers me...then he feels guilty for getting upset. You just can't be on call and have a life too.

Therefore while Pauline perceived that her relationship with her husband was a very important support system for her, she found that attempting to balance her professional and personal responsibilities was a stressor as well.

Recreation and other forms of distraction. In order to distract herself from the weight of her responsibility while she was on call, Pauline tried to employ coping mechanisms, but these were not always effective. Both nurses were convinced that it was important for them to engage in a wide range of activities in order to avoid becoming too focused

on their work responsibilities. Both nurses enjoyed outdoor recreation and social activities. Much of Margo's ability to cope with stressful situations was a result of her considerable experience as a nurse in an isolated setting. Pauline was less experienced and had not had as much opportunity to develop coping mechanisms and resources; in certain situations she found it difficult to escape her anxiety.

When I'm not on call, we try to ignore it by going out in the bush or sitting at home and reading quietly. But when I'm on call, I worry that there is someone trying to reach me. Or if I'm not on call I worry that Margo is back at the nursing station maybe trying to deal with an emergency and I'm not there. It's always there..even when you're not on call, it's always there.

Margo, who was relatively secure in her role, was usually able to divert her emotional energies to other activities whether she was on call or not on call.

Work-related Health Issues

These nurses viewed health as a multi-dimensional construct. In the nurses' view, their health status affected their work and their work affected their health status.

When a nurse is ill. These nurses experienced psychological conflict when they themselves became ill. If the regional nurse became ill and unable to work in the clinic, there were two options: either the clinic had to be closed for the day, or the public health nurse was required to take over clinic duties. Margo reported that on one

occasion she took some cough medicine that made her so sleepy that she was unable to work; Dottie, the nursing assistant was forced to act as a "triage nurse" and deal with everyone who came into the clinic, "asking people who weren't 'dying' to come back another day". Margo, reflecting on an experience in another setting, related an incident that caused her to eventually re-consider her commitment to outpost nursing. While off duty, Margo injured her knee severely. Even though her pain was great, she attempted to work a normal day in the clinic. Eventually she became incapable of continuing at work, so another nurse had to be recalled from her off duty time to take over from Margo. Margo reflected, "at one point I had to say... I can't do this...I can't hop around on one leg and stitch up someone's eye". She eventually left that particular nursing station. Margo indicated that she felt guilty when she was ill, but that she would feel less guilty and less inclined to force herself to come to work if a replacement could easily be designated. In her view,

Staffing is a big part of the problem. I've often thought that there should be a nurse in Goose Bay who could drop everything and relieve on short notice. I don't know if they could find someone willing to do that...if money were no object, that's what they should do.

Pauline did not usually offer to replace Margo when Margo was ill, but she would do so if she was asked. If the public health nurse was unable to work, then the regional nurse assumed some of her duties, but as a rule, she was not

required to step into the public health nurse's shoes in the same manner that the public health nurses assumed the regional nurse's duties in her absence. The public health nurse did experience some guilt when she was unable to work, but her absence from the work place was not as potentially disruptive to the clinic routine as the absence of the regional nurse.

Sleep deprivation. Twenty-four hour responsibility for health care caused occasional sleep deprivation and disturbances in body rhythms which, in the nurses view, took days to overcome. Margo stated that lack of sleep was the most pernicious side effect of her role responsibilities.

Being on call all the time or even every three nights...has an effect on your physical capability. Especially when you're up in the middle of the night and then you're up at nine o'clock to do clinic.

On the occasions where sleep was interrupted repeatedly, the cumulative loss of sleep affected both the nurses' physical capabilities, but their psychological resources as well. Thus the daily demands of their roles, challenging at the best of times, were made even more difficult by fatigue. The responsibility of being on call affected Pauline to such an extent that her sleep pattern was directly affected:

I can still go to bed and go to sleep but all night long I wonder what I would do if there was an accident, or I wake up and think consciously that I haven't had any calls.

Stress. The telephone is a major mode of communication between nurses and patients, and between nurses and health care support systems. When the nurses were on call, however, the telephone, and its ring, often evoked a negative response. Even though, by Margo's own admission, being on call in Tunganiksavik was not as demanding as it had been in some other settings, "I'd prefer it if the phone didn't ring at all. You can't turn it off..it's hard for it to go away. " Margo reported that when she was not on call, and the responsibility to provide care and the threat to any potential interruption to her privacy had ended, a conditioned response to the telephone continued to occur.

For three or four months after I left the Northwest Territories I used to tense up when the phone rang, and I still do. It doesn't even matter if I'm on call or not, the phone ringing still gets to me.

For Pauline, the most difficult aspect of her role was the psychological and physiological burden of being highly visible and continually responsible. Pauline described the psycho-physiological effect of being on call.

When I'm home and on call, the adrenalin starts pumping as soon as the phone rings..even after you've answered it and it isn't a call, you're heart is still beating fast.

Both nurses experienced this effect to some degree, and reported that the expectation of being startled from a deep sleep, or even from a state of relaxation, could create a state of tension, even if the telephone did not ring. In this situation, adaptation to the telephone ring implied

that the nurse could recover quickly from an interruption, and resume her activities with minimal physiological or psychological tension.

When the nurses were on call, and not available to answer the phone, a message to that effect was placed on the answering machine in the nursing station, indicating how the nurse on call could be reached. The nursing assistant, Dottie, recalled that before the nursing station had a telephone answering machine, a nurse could not leave the nursing station when she was on call, as she was required to be available at all times. While the presence of technology relieved the some of the burden of taking call, it also created an additional stressor. The nurses sometimes resented the requirement to place a message on the machine, especially for circumstances such as the intent to take a short walk. This resentment was generated primarily by the loss of personal space, privacy and control that accompanied the requirement of the nurse to publicize her movements so frequently.

Margo:

I often resent being on call. I have no personal privacy...just taking a bath is difficult. I hate putting on the answering machine that I'm taking a bath so I paid for an extension cord so I could take the phone in the bathroom.

The nurses tried to decrease the risk that a patient in need might not have been able to reach them, and the fear that a patient might suffer because they were unable to reach a nurse was a nagging one.

Margo:

I feel much better when I'm near a phone because I know that someone can get me...I don't dwell on the fact that this or that may happen but I do think about it in the back of my mind.

On one particularly fine March afternoon, after four o'clock, the two nurses, the nursing assistant and the researcher decided to travel by snow machine to a wooded area fifteen minutes outside of the community for a "boil-up". This traditional outdoor activity, involving firewood, a blackened kettle, heavily sweetened tea and biscuits, was, for the nurses, a welcome reprieve from the both the four walls of the nursing station and the community itself. As the party sped from the sight of all of the houses, the nurses were cheerful, even exultant in their freedom. As the group played in the snow and waited for the kettle to boil, there was much laughter in the party. The nursing assistant had assured everyone that she had left a message on the answering machine indicating exactly where all the nurses could be found. Occasionally however, one of the nurses did mention that they hoped no one was trying to reach them, and indeed even the researcher could not completely forget that the group was not within immediate reach of the community. The reprieve from responsibility

was a short one, if it was a reprieve, but the behaviour of the nurses indicated that it had been well worth the small effort. The nagging fear that a patient may not be able to reach them often led the nurse on call to choose not to go out at all: "When you're on call, it's always there. You can't go out because someone may be trying to get you".

Pauline, by her own admission, believed that as a nurse, her knowledge of illness and disease was oppressive, even more so since she began practicing in an isolated setting. In the process of learning to assess and diagnose patients independently, she became extremely vigilant for potentially dangerous physical symptoms in herself. This vigilance, which, she stated, had increased noticeably since beginning her work in Tunganiksavik, remained unexplained by Pauline, although she had a sense that increased fatigue and anxiety, brought on by the awareness of the scope of her responsibility, was a contributing factor: "I find it hard to have the responsibility...there are (317) people in the community, and it is too big a number to rely on me." At other times during the data collection, Pauline stated that she felt that she was "fairly healthy" because she was "not sick". These apparently contradictory statements reflected changes in Pauline's view of herself, her work, and her ability to cope with its demands. She stated: "I suppose sometimes I'm half and half emotionally healthy...it depends on what has happened throughout the day." At times she was

visibly content and relaxed in her role, and at other times, when she felt that the demands of her role exceeded her capabilities, she experienced tension and other related symptoms of stress. Commenting on those aspects of her role that were considered to be in the domain of public health, Pauline indicated that it was as a public health nurse that she felt most comfortable. On one occasion, after the researcher had attended a pre-natal class, which Pauline had conducted, Pauline asked the researcher's opinion on her performance in the class. Her speech was punctuated by statements such as, "I don't have my B.N. (Bachelor of Nursing) so I've never taught classes". She stated that although her lack of this qualification bothered her, she gained some satisfaction in the knowledge that she was able to perform the functions of her role well regardless of her qualifications; her supervisors and her peers recognized her for her work. Pauline was ambivalent about her work; on one hand she recognized both its positive features and her capabilities as a nurse, but on the other hand she experienced much anxiety related to the demands of her role.

Pauline described with much emotion a period of time when she was working alone in the nursing station for three weeks. It was a special holiday time and Margo was out of the community on vacation. As the only nurse in the community, she was on continuous, twenty-four hour call; at the same time she attempted to perform her duties as a

public health nurse. Over an extended period of time such as this, she was actually performing two roles: that of regional nurse and that of public health nurse. She stated: "the stress level in my own job is not half of what it is when I am covering for (Margo) in the clinic." When responsible for treatment and diagnosis of problems, Pauline rarely felt that she had control over the situation, and Pauline's lack of confidence in her abilities is obvious in the following remarks:

I never feel that confident...for me it's always a possible thing, never a definite thing. Not knowing is probably the worse. If someone is in the clinic and is getting better, that's OK. If someone is stable and remains stable, that's OK too. But if he is going downhill, that's terrible...It has something to do with capabilities..my own, I suppose.

Even more difficult than actually performing the treatment task was the task of sharing with others what actions she had taken.

I find it difficult to tell anybody what I've done when I'm on call, even the Public Health stuff. Sometimes I'll give a report and Margo will say 'well, did you check out this' or 'did you check out that'. I'm my own worst enemy and I feel badly if I hadn't thought of it.

Pauline attempted to rationalize her self-doubts:

I'm not trained to do clinic work, so it's not so bad. It can be helpful for me, because I can learn something from it...as long as I know where the pain is, and I can help someone, that's all that matters, but I don't always know the medical term for it.

Pauline expressed feelings about her role responsibilities with a resigned tone in her voice: "there is nothing I can do. You can't get away from it". While admitting that there were psychological and physiological stressors associated with hospital nursing, Pauline stated that coping with her role as a nurse in Tunganiksavik was by far more difficult. While admitting that she felt challenged by her role and occasionally felt stressed by it, Margo did not experience the same self-doubts as Pauline. It is also true, however, that Margo's role was more clearly defined than Pauline's, and she rarely had to expend any psychological and physical energy to learn Pauline's role.

For Pauline, physical health was an important resource in assisting in the process of adaptation to stress. Pauline considered herself healthy if she was "free from physical or emotional sickness, feeling good about herself and her body". At the time of data collection Pauline was not enjoying good health:

Work definitely effects me emotionally. The stress of it all...there is the physical side like tiredness and headaches. But I think that the stress levels have a lot to do with it...

Pauline's view, her work had direct and specific effects on her well-being, and she believed that work-related stress played an important role in her health. Pauline was concerned about her physical health and was able to describe how working in Tunganiksavik had affected her:

Since I've been here, I get more headaches, at least once a month and I think I'm getting an ulcer. Emotionally, it's not good....I'm not healthy. I'm not in good shape.

Not only did Pauline begin to worry about physical symptoms that she had previously only occasionally experienced, she had begun to develop physical symptoms of a chronic nature such as headaches and gastrointestinal disturbances.

The twenty four hour nature of their work deprived both nurses of much of their privacy and eroded their social freedom.

Margo:

Unquestionably in the North your life revolves around your work even if you don't want it to...for example when you go out socially and you see someone drunk, or you see kids in a ski-doo...when you are the nurse in the nursing station I do notice.

Both Pauline and Margo felt that they could never abandon their identities as nurses, even when they attended social events; neither did people in the community allow them to do so. No matter how detached the nurses might have attempted to remain, situations often arose that would force the nurse to abandon her neutral social status and assume the role of nurse. Even if an intervention was not immediately required, the nurses would wonder what the health care consequences of a particular event might be. According to Margo, these situations were:

a combination of fear and frustration; frustration that you're going to have to go back to work and terror if someone is in really bad shape. I think I'm becoming a little less fearful and frustration is the more prominent emotion.

Margo was able to trace how her emotional responses to this kind of event had evolved over the years: when she first began nursing in isolated settings and attended community social events, it didn't really connect that she would be the one "cleaning up the mess". As she gained more experience, she developed an increased awareness of the implications of her role as a nurse in the community and that she had specific responsibilities that she could not ignore. As her awareness developed, so did her resentment. This was clearly illustrated on a Saturday night when some local youths got into a fight at a local dance. Margo was in attendance. Her first reaction was: "Oh shit, I'm glad I'm not on call", and she expressed sympathy for Pauline, who was the nurse on call. Indeed, it was necessary for Pauline to attend to the patient injuries that resulted from the fight.

Margo believed that her own health status was related to a variety of factors in both her professional and non-professional life. She considered health to be multi-dimensional and subjective, and, like Pauline, recognized an interaction between emotional health and physical well-being. In Margo's view, her emotional health was strongly affected, both positively and negatively, by her work role.

It can make an awfully big difference on your self-satisfaction. (Work) can evoke strong emotions for me...although each event in itself may not be significant, they can accumulate to create a sense of satisfaction or dissatisfaction.

Rather than take the view that each isolated event of her work day affected her health status, she believed that positive and negative situations combined to exert a net positive influence on her well-being.

CHAPTER V

DISCUSSION

Authors who have investigated occupational health and occupational stress have identified many factors which, taken together or separately, have been found to exert an influence on the occupational health status of nurses. These factors include role overload, role ambiguity, and role conflict, social support, level of responsibility, responsibility for patient care, occurrence of frequent patient crises, individual cognitive abilities, motivation, and commitment, self-esteem, individual coping style, interpersonal relationships, and lack of control over the work environment (Cronin-Stubbs & Velsor-Friedrich, 1981; Garbin, 1979; Olson, 1977). The two nurses in this study were found to have experienced a variety of factors which affected their relationship to their work role and subsequently their health status. The results of the research will be discussed under the broad headings of internal variables and external variables affecting health status. Factors discussed under internal variables will include various elements of the nurses' physical and social environments. Internal variables affecting health status will be reported in relation to job satisfaction, stress and coping styles. Finally, the nurses' view of their own occupational health and a related model of occupational health will be discussed.

External Variables

Physical Environment

Each nurse was able to identify her relationship to the physical environment and the effects of working within this environment. The regional nurse perceived that she was somewhat restricted by the cold weather. The geographic and social isolation made it less desirable for her to spend a lot of time outdoors and enjoy those social and recreational activities in which she would have participated if she had been living in a less isolated and less environmentally brutal setting. She did express an appreciation for the beauty of both the summer and winter environment; however data collection took place only in the winter months, and the regional nurse's recreational and social patterns in warmer weather were not observed. The public health nurse expressed less of an antipathy for the weather, except in situations where personal or patient travel was affected. In a situation where poor weather and poor travelling conditions impeded medical evacuations, the nurses were forced to provide care when they would have preferred that the patient be cared for in a hospital. These events were often frustrating and often stressful in themselves, and created demands on the nurses physical and psychological resources that contributed to stress and fatigue. In these kinds of situations, nurses were occasionally subjective to

the "quantitative and qualitative" role overload that has been found to contribute to occupational stress (French & Caplan, 1973). In effect, the geographic and social context of their work created limitations in both the personal and professional lives of the nurses.

The workplace. The physical structure of the workplace also exerted influence on the nurses. As Hodgeson (1980) has identified, there is a blending of personal and private space in the nursing station. Both of the nurses recognized the limitations of living and working in the same building, although this arrangement only directly affected the regional nurse. It was not a problem with which the regional nurse could not cope; indeed, she recognized the advantages of the arrangement. But the regional nurse was not immune to feelings of resentment over the accompanying lack of privacy and invasion of personal space when her co-workers and others were working or visiting in the living quarters. Although Hodgeson (1980) has stated that one of the major challenges of the nurse in the nursing station was the creation of private space within a public building, in the regional nurse's view this was only a peripheral issue: of some importance, but not an issue that was a major challenge. In addition, living and working in the nursing station established a functional isolation for the regional nurse, of which she took advantage when she wanted to

withdraw from social interaction within the community. The regional nurse used withdrawal as a coping mechanism, and the functional isolation was not a stressor for her.

Social Environment

The community. The nature of the community and its people affected the nurses' ability to find social outlets in the community. The regional nurse, initially firm in her resolve to integrate socially into the community, eventually receded from this resolve. The public health nurse's social activities and community health role brought her physically and socially closer to the community at large, but even at this she established few intimate friendships with people in the community. This confirms Hodgeson's (1980) impression that the outpost nurse often interacted with community members only in a professional mode. The nature of these nurses relationship to the community was related to personal interactional style, personal choice, and time constraints. The nurses needed privacy, and wanted to exert a degree of control in a work role where they were expected to be continually responsive to the health care needs of the community. At no time did these nurses ever pronounce any sense of dislike of or anxiety about the people of Tunganiksavik. Although patients in northern and isolated communities experience major health problems that one could assume would provide major health care challenges, the nurses in this setting did not perceive that the community's

health problems contributed in any major way to the nurses' relationship to their work, their job satisfaction or their occupational health. The occasional emergency that required superior nursing and medical care skills was challenging to the nurses not because of the nature of the illness, but because of the nurse's distance from support systems, lack of experience with managing a particular type of health problem, or total responsibility for managing the patient care situation.

The patient care facilities of the nursing station were modern, bright, and roomy, yet the nurses stated that the facilities had little net effect on their sense of well-being.

Work relationships. Researchers have reported that nurses identify relationships with physicians and other peers as being sources of stress (Olson, 1977). In this setting, the physicians were considered by the nurses to be consultants in health care. The nurses used the physicians frequently when planning and implementing patient care, but the relationship, perhaps more collegial than in many other health care settings, was not without conflict, and the conflict often centred around patient management or patient evacuation. Like nurses in other health care settings, the nurses occasionally resorted to "doctor-nurse" games in order to influence physicians' opinions as to how patients

should be treated or cared for. For the most part however, the relative autonomy of the role was honored by the physicians with whom these nurses had contact.

These two nurses did not live together as do many nurses who work in isolated settings. There was no evidence that these nurses had established a familial relationship, such as Hodgeson (1980) has described. Some conflict existed between these nurses, although it was not clear what direct impact the conflict had on the nurses' occupational health status. Certainly, the regional nurse willingly acted as a consultant to the public health nurse when necessary, and although it occurred less frequently, the public health nurse acted as a consultant to the regional nurse. Relationships were cordial, occasionally jovial, but the nurses did not disclose many of their personal issues to each other; most of the support offered was of a professional nature. These nurses, in restricting their communication with each other to a professional mode, were engaged in keeping what Larson (1987) termed "helper secrets"; the nurses were not able to share each other's personal anxieties, and the "secrets" themselves (issues such as feelings of inadequacy and anger) could actually have become internal stressors and exerted a negative influence on the nurses. The regional nurse felt less supported by the public health nurse than the public health nurse felt supported by the regional nurse. O'Neil (1987)

also identified conflict between nurses in an outpost setting, but the reasons for conflict, cited as differences in philosophies of care, were not the same as those observed in this setting. The public health nurse had a unique support system in the form of her husband, but it is interesting to note that the public health nurse became distressed when her friendship with the nursing assistant chilled and she could not explain the reason. With the perceived loss of this friendship, the public health nurse actually experienced the loss of a support system, which was traumatic for her.

The nurses valued the support personnel in the nursing station, and their presence impacted positively on the nurses relationship to their work. O'Neil (1987) also identified the importance of positive relationships with the nursing station support staff. The regional nurse, however, was frequently frustrated by the amount of her time that she was required to spend in obtaining and utilizing resources and support personnel from outside of the community. In this, these nurses echoed other groups of nurses who have identified the importance of consistent and reliable support systems and resources to assist them in their work (Schuler, 1980). These nurses were remarkably patient in accepting the imposed limitations of weather, distance, and transport when they were requesting or waiting for supplies and mail, but these nurses felt abandoned if support was difficult to

obtain, not because of physical impediments, but due to human inefficiencies, or when a patient's health was directly or indirectly affected by a delay.

Role Characteristics

The nature of the small community and its geographic isolation added a dimension to the nurses' work that perhaps has no parallel in other nursing roles: that of twenty-four hour visibility and responsibility as primary health care-givers. In many ways, this characteristic of the role is similar to that of the old-style country doctor. However, unlike physicians, neither of these nurses had any formal preparation for this extended role. Hodgeson (1982) stated that while physicians are socialized to this aspect of their role when they are still students, nurses are not; this lack of socialization leaves nurses vulnerable to anxiety about their capabilities and feelings of self-doubt.

It is popularly believed that nurses in this setting experience stress and dissatisfaction from geographic and social isolation. While these nurses experienced some negative effects from these factors, it was those variables which were closely associated with role characteristics which were found to have even more significant effects on occupational health. The characteristics of the role that most affected the nurses were (a) continuous visibility and identity as nurses and (b) the often overwhelming responsibility to provide a twenty-four health care service

with minimal resources and support systems. These factors combined to create psychological and physiological stress, in varying degrees, in each nurse. Ironically, in one of the most autonomous roles that exists in nursing, the nurse in this setting becomes almost a public property. The community's need for a wide range of health care services placed a specific set of demands on these two nurses that they were unable to predict and control. When the nurses were on call, the potential interruption of rest and recreation, coupled with any degree of anxiety about possible interruption of off-duty time had the potential to influence the nurses' physical health by suddenly interrupting rest and relaxation and psychological health by challenging their coping resources.

Each nurse's role was separate and not related to the other in a structural way. Functionally, however, the nurses' roles were strongly interdependent. The regional nurse relied on the public health nurse for role support in the event of her own physical illness or absence, and at times, consulted with the public health nurse about patient care issues. Even more significant was the prescribed reliance of the public health nurse on the regional nurse for the maintenance of the public health nurse's office and physical facilities, and the requirement that the public health nurse provide patient care during on-call duties or substitute for the regional nurse during her absence. The

regional nurse, whose role demanded that she maintain responsibility for providing primary health care and supervising the maintenance of the physical plant, was the public health nurse's supervisor in these areas. The public health nurse then, an ostensibly independent practitioner, perceived that she was accountable to the regional nurse in relation to aspects of patient care outside of the realm of public health. In addition, she was unable to make any major decisions about her own work environment, or use the services of the support staff without the permission of the regional nurse.

The public health nurse experienced three factors which affected her relationship to her work role: role ambiguity, role conflict, and perhaps most significantly, role overload. As a public health nurse, she was secure in her knowledge and awareness of the requirements of her role: preventative health care and community health education. However, because she was living in an isolated setting, she was also expected to perform as a primary health care nurse. She accepted the responsibilities of a public health nurse, and although she accepted the fact that her responsibilities included primary health care, she did not psychologically integrate this into her own role, usually referring to these responsibilities as belonging to "the other role". She questioned her own expertise as a primary health care nurse, and experienced much anxiety when she was required to act in

that role. This dual nature of her role exposed her to quantitative and qualitative overload (French & Caplan, 1973): having too much to do and not being able to accomplish all that she was required to do. The public health nurse also experienced role conflict, especially in those situations where she was called upon to replace the regional nurse when she was ill. The conflict resulted from her attempt to balance the demands of the public health role and the regional nurses role. If she temporarily abandoned her public health activities, the nurse was in effect devaluing her usual role function. By her own admission, primary health care activities had a more immediate impact on patients' health, and by abandoning this responsibility she perceived that she would be abandoning her patients when they were ill. Unable to perform two roles at the same time without compromising either, she was vulnerable to role conflict.

Internal Variables

While each nurse experienced the impact of external factors, it cannot be said that each member of this work group experienced the impact of these factors in the same manner. Rather, the occupational health status of the nurses was found to be related to the interaction of several factors, and the outcome of this interaction, the health status of the nurses, was a unique result of that

interaction. For these nurses, the factors which influenced occupational health the most were found to be variables that were predominantly internal: job satisfaction, coping style, and response to stress.

Job satisfaction

Hickman (1985) identified cognitive abilities, intelligence, personality characteristics, commitment and motivation as factors that influence job satisfaction in nurses. While this researcher did not attempt to describe individual differences in the nurses' cognitive abilities and intelligence, it is true that the nurses did show differences in individual characteristics such as past experience, motivation, and coping styles. The regional nurse's past experience in an outpost setting had assisted her to develop knowledge and skills that the public health nurse had not yet developed. The regional nurse had chosen to work in an outpost setting because of the very role characteristics that the public health nurse found to be stressful: autonomy, responsibility and challenge. The public health nurse stated that she had been highly motivated to work in public health, but not particularly motivated to work as an on-call nurse in a primary care setting. This latter feature of her role was the one which caused her considerable anxiety.

The regional nurse expressed satisfaction with her role, and attributed her satisfaction to the nature of her role and the personal and professional rewards of being an autonomous and effective care-giver. On the other hand, the public health nurse was only partially satisfied with her role, citing factors such as role overload, role conflict and ambiguity as being instrumental in her dissatisfaction. The public health nurse's reasons for dissatisfaction with her role were similar to reasons for job dissatisfaction reported by Abdel-Halim (1978).

Stress Response and Coping Styles

Each nurse attempted to cope with the demands of her role in a unique manner and each had varying degrees of success. However it can be stated that the public health nurse experienced more role-related stress, and therefore expended more adaptive energy. Bates and Moore (1975) reported that role stress results from role conflict, role ambiguity, and role overload; the public health nurse experienced these factors and her role-related stress was considerable. The public health nurse experienced physical symptoms which she perceived to be the result of role stress; similarly Hickman (1985) identified a relationship between work stress and physical illnesses such as fatigue, insomnia and gastrointestinal upsets. And just as Norbeck (1985) reported that an increase in the level of perceived job stress was directly related to job satisfaction and

increase in psychiatric symptoms, the public health nurse, who was observed to experience much more work-related stress than the regional nurse, displayed a subjectively negative view of herself in her role.

Health Status

From data acquired from the nurses in this setting, work-related health can be described using a framework of occupational health in which health is characterized as a biopsychosocial construct (See Figure 2). Rather than being considered separate factors, the constructs of stress and coping can be used to characterize the nature of the interaction between internal and external variables affecting occupational health. Both internal and external factors affect occupational health status, but it is the relationship between internal factors and each of the categories of external variables that most precisely defines the occupational health status of the nurse. The external work environment exerts a set of demands on individuals who respond to these demands. Internal variables themselves may act as stressors; for example, low self-esteem can create destructive thought patterns that may affect an individual's ability to cope. In addition, a variable such as job satisfaction could be viewed as an internal coping resource, or as an indicator of occupational health status. The individual's response to the interaction of internal and

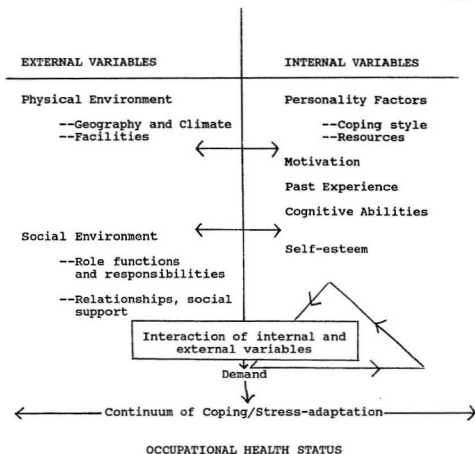


Figure 2. Framework of Occupational Health

external variables will place her on a coping/adaptation continuum. The coping/adaptation continuum reflects both physiological and psychosocial health status. This model reflects the findings that members of a work group may indeed be affected by a work environment in similar ways, (by citing similar environmental stressors, for example), using like concepts, without experiencing the same internal responses or health status. In this study, each nurse interacted with similar environmental factors, but because each nurse carried with her a distinct set of internal variables, each nurse's health status was unique.

It is valid to construct a framework which characterizes occupational health in an isolated setting, but it was not established that nurses in this isolated setting had a common experience of work-related health. Much of the research in this area has focused on the phenomenon of occupational stress rather than the construct of occupational health. This research has demonstrated that these two nurses viewed work-related health and work-related stress as integral components of the larger construct of occupational health and that they viewed their own occupational health as the result of an interaction of several factors.

Hyman and Woog (1982) have stated that it is the perception of the event, rather than the events themselves, which have the greatest effect on health status. This research supports this conclusion. The nature of outpost nursing places the nurse in a situation that is predictably unpredictable. The public health nurse particularly experienced much ambiguity about both her role and her feelings about her role. The health of these nurses seems to have been mediated most strongly by internal variables such as past experiences and coping style, rather than by external variables such as environment and role structure. However, demands of their work roles did strongly affect the nurses' occupational health; this effect was both positive and negative. For example, the regional nurse derived much satisfaction from successfully meeting the challenges of being an autonomous practitioner. It would have been difficult to imagine this nurse in any other patient care environment. She displayed diligence and joy in her work. Nonetheless, even this strongly motivated, capable nurse experienced feelings of frustration and anxiety when she was unable to accomplish patient care goals. In addition, she was forced to create social boundaries for herself when she was unwilling to become involved in the social life of the community. The public health nurse, although stating that she too derived some satisfaction from being able to function in this setting, was more susceptible to self-doubt

and self-recrimination in response to the demands of her role. She was competent in her role as public health nurse and diligent in fulfilling all of her role responsibilities, but she experienced so much role-related stress that she suffered physical ailments of a chronic and debilitating nature, and psychological effects such as anxiety. Just as Margolis, Kroes, and Quinn (1974) identified a relationship between occupational stress and self-esteem, the public health nurse's lack of confidence in her ability to carry out all of the responsibilities of her role created a state of almost chronic anxiety, which, in turn, affected her self-esteem as a nurse. Both nurses were exposed to similar environmental factors, but it was each nurse's interpretation of those factors that most clearly predicted her occupational health status.

It is possible then, to conclude that the experience of occupational health is a complex phenomenon which is neither easily described nor easily influenced. Internal variables which mediate occupational stress are a product of complex intrapsychic processes which are not easily measured, and the interaction of external and internal variables influencing occupational health does not allow the placement of an individual onto a discrete position on a health continuum. Rather, the individual moves along a continuum of occupational health as he or she interacts with and responds to environmental influences. Finally, it can be

concluded that the experience of occupational health is part of the experience of health in general, and the individual's work-related health is an extension of his overall health status.

CHAPTER VI

LIMITATIONS OF RESEARCH AND RECOMMENDATIONS

Strengths and Limitations of Research

The ethnographic method is well suited to this kind of investigation. The process of entering a setting to discover personal views of occupational health allowed the researcher to observe and discover a wide range of inter-related attitudes and behaviour that contributed to the nurses' occupational health status. In addition, the personal experiences of the researcher during data collection contributed to a holistic understanding of occupational health phenomena. The researcher was successful in uncovering many of the personally-held attitudes and beliefs of the nurses being studied. The primary limitation of using an ethnographic method for this research was that there existed a strong potential for researcher bias to enter into observations. This limitation was an especially powerful one, as the researcher had previous nursing experience in an outpost setting. In addition, the relationship of researcher and informants is, by its nature, unique, and the reliability and generalizability of this study cannot be established. The other limitation of the study was that the researcher spent only two months in the research setting; it would certainly

have been beneficial to observe the nurses as they worked through different seasons and the accompanying changes in climate and patient care situations.

General Recommendations

The results of this study lead the researcher to recommend that Grenfell Regional Health Services examine both the positive and negative aspects of its division of primary health care nursing responsibilities into two separate community nursing roles. The Grenfell Regional Health system is different from health care delivery structures in other northern regions of Canada in its separation of public health and regional nurse duties. A broad investigation of the desirability and effectiveness of designating these as separate patient care roles may be helpful in order to assist all health care delivery systems in northern settings to better structure patient care roles. In addition, it is also recommended that agencies who employ nurses in isolated settings make available to those nurses frequent, relevant and structured occupational stress management and professional development programs. Nurses who work in isolated settings should be prepared for their expanded role by post-graduate educational programs and/or mandatory intensive, in-house continuing education and preceptorship programs, in order to facilitate the transition from a traditional nursing role to that of an

autonomous nursing practitioner. Nurses in this setting may also benefit from frequently scheduled breaks from the community, and the availability of designated nursing staff to provide relief nursing services during such scheduled break periods.

Recommendations for Future Research

Much of the data in this research came from the nurses' own willingness to share their personal stories. From these stories, many questions were generated which should serve as the basis for future research. The most important of these are as follows:

1. To what extent does the type of professional nursing education and preparation for the role of outpost nurse affect responses to work-related stress?
2. Are there specific internal variables which are more predictive of personal success in an autonomous nursing role than others? How do these factors compare to predictors of success in other areas of nursing practice?
3. What are the cumulative health effects of twenty-four hour responsibility for patient care in nursing stations with only one nurse? more than one nurse?

4. How is the occupational health experience of the outpost nurse different from the occupational health experience of a physician in a small community?
5. Do environmental variables more strongly affect the occupational health of outpost nurses in communities where cultural factors such as language are more at variance with the nurses' own culture?
6. What interventions will be most effective in alleviating work-related ill health, and occupational stress?

An ethnographic study in which the researcher compares groups of nurses working in a variety of isolated settings would be more reliable than this present study, because of comparisons made across work groups and communities. Such a study would build on present research, generating broader questions and establishing a more reliable framework of occupational health in isolated settings. Finally, ethnographic studies in the area of occupational health would become even more valuable if the questions generated by the ethnographic method were subjected to quantitative analysis in parallel studies on similar populations.

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APPENDIX A

Field Notes

DATE: February 10, 1987

SETTING: Living Room

NOTES

SUBJECT/ACTIVITIES/VALUE

12:45

Nurse frustrated

External org. affect on
ability to care for
patient.

M.: calls hospital
looking for Don - out.
Calls for Dr. on call,
out. To operator at
hospital: "Is there
anyone I can talk to?
(Gets a Dr.). Describes
symptoms. (Dr. thinks
patient should go out).

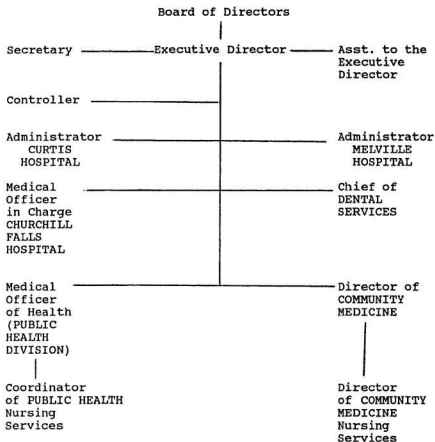
M.: (to Dr.) "Are you
going to call RT?" (Dr.
suggests that nurse call)
"Connect me to RT".
(describes situation to
RT..RT says they can't do
a medevac without the word
of the community medicine
Dr.)

Interaction style
Relationship with Dr., RT

M.: "Jamie's at the
pool!" (RT says they'll
try and find Dr.) "If you
can't find him in 1/2 hour
get the arrangements
started and I'll take the
responsibility...If you
can't get things arranged,
call me back, OK?"

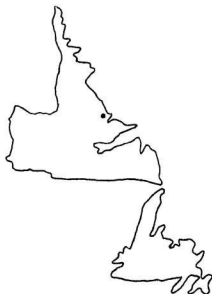
APPENDIX B

Grenfell Regional Health Services Organizational Chart



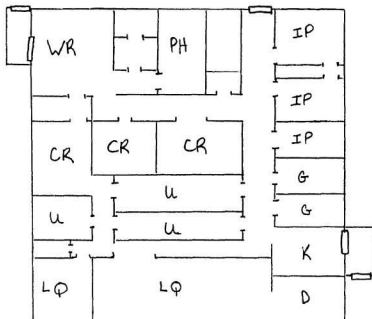
APPENDIX C

Map of Newfoundland and Labrador



APPENDIX D

Plan of Nursing Station



CR: clinic room
IP: in-patient area
LQ: living quarters
D: dining room
G: guest bedrooms

PH: public health office
WR: waiting room
K: kitchen
U: utility/storage

APPENDIX E

Consent to Participation

Dear (Participant):

I am a graduate student in nursing at Memorial University. I am currently at work preparing my thesis on occupational health in nursing. The occupational health of nurses is gradually emerging as an important issue in the nursing profession. As the role of the nurse changes, so does the nurse's work experience, work situation, and work expectations. It has been shown, through a wide variety of research that nurses are at risk for developing occupational ill health, and that this ill-health may be related to the many changes that confront nurses in a specific work setting.

In the year previous to my entering the graduate programme, I worked in the isolated setting of the MacKenzie Delta Region of the Northwest Territories. My experience prompted an interest in the occupational health of nurses working in isolated settings in Canada. Therefore, I have chosen to study this issue in my thesis work.

The purpose of my proposed study is to learn from you, as a member of a group of nurses working in an isolated setting, about your experiences of occupational health and occupational ill health in relation to your work in the nursing station. I would like to come and visit you in the nursing station for a period of two months. While at the nursing station, I would like to (a) discuss with you your experiences of work-related health and ill health, and (b) try and identify those factors in your work and your work setting which may contribute to work related health or ill health. If you agree to participate in this study, I will be (a) speaking with you in a formal interview on a weekly basis; (b) observing the operation of the nursing station and you as a member of the work group in the nursing station; (c) recording this information by using handwritten notes or tape recording (depending on your wishes).

I do not anticipate that participation in the study will have any immediate benefit for you. All information gathered from you or observed by me will be utilized for the purpose of preparing an academic thesis. Participants will not be identified and all information will be confidential.

If you decide to participate in this study, I will make every attempt to minimize any inconvenience to you while the research is being conducted, and at any time during the study, you are free to withdraw from the study.

If you have any further questions regarding the project, please feel free to contact me.

Sincerely,

Cathie Thibeault, R.N.
Phone: (collect)

I agree to participate in the study as described above. I understand that all information will be kept confidential, and that I am free to withdraw from the study at any time.

Name

Date



