THE INFLUENCE OF JOB AND COMMUNITY SATISFACTION ON RETENTION OF PUBLIC HEALTH NURSES IN RURAL BRITISH COLUMBIA

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ABSTRACT

Despite persistent issues in retaining nurses, there has been little research on retaining Canadian rural nurses. This research focuses on the retention of public health nurses living in largely rural regions of British Columbia.

Research from the United States found that both community and job satisfaction are important in retention of rural public health nurses. The purpose of this study was to examine: 1) public health nurses' satisfaction with their nursing practice and community, and 2) the relationship of public health nurses' job satisfaction and community satisfaction to their decisions to stay in their current jobs. A mailed survey with two mailed follow up reminders was sent to all public health nurses' employed by health authorities in eight predominately rural health regions in British Columbia. This produced 124 responses (76% response rate) for data analysis. Both descriptive and inferential statistical analyses were used to interpret the data. This interpretation was supplemented by the public health nurses' written responses explaining why they would stay or leave their current employment.

This sample of public health nurses was most satisfied with their professional status, professional interaction and their autonomy. They were least satisfied with their salary. There was no significant difference between rural and non-rural public health nurses' perceived satisfaction with their practice. Public health nurses were most satisfied with their communities' acceptance of their partners, friendliness of the community and their friends. The public health nurses rated their community satisfaction higher than their job satisfaction. There

were two areas of significant difference in community satisfaction between rural and non-rural public health nurses: rural public health nurses felt lower levels of anonymity, and rural public health nurses were less satisfied with being consulted outside of work hours.

Although 52% of the public health nurses were planning to remain in their present job for another five years, this research did not support that job satisfaction or community satisfaction positively influenced retention. However, the public health nurses' written responses revealed that "filter factors" affected their reasons for staying or leaving, regardless of their job and community satisfaction. Some of these "filter factors" were age, retirement, family needs and commitments, the economy and loss of portability of benefits. It was apparent that retention had already taken place for half of these public health nurses and efforts should be made to retain the other half of this sample, specifically the younger cohort. A focus on recruitment will be necessary, as 28% have reported they intend to leave in two years or less.

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CHAPTER ONE: INTRODUCTION

Retaining professionals in rural and remote locations is a well documented problem (Canadian Education Association, 1992; Hays, Veitch, Cheers, & Crossland, 1997; Kazanjian, Pagliccia, Apland, Cavalier, & Wood, 1991; Northern & Rural Health Task Force, 1995). The impact of unfilled positions is disruption of service delivery and costly recruitment initiatives for the rural community (Clevett & Maltby, 1992). British Columbia recruits nurses from other provinces to fill nursing positions; only 50 to 60% of new nursing registrants are educated in British Columbia (RNABC, 2001a). This, combined with the nursing shortage, underlines the importance of retaining the public health nurses who are presently working. A beginning step towards retention would be to identify what public health nurses in rural British Columbia find satisfying about their work and community.

There are numerous factors that influence professionals to make their choice to stay or to leave rural communities. These include access to continuing education (Leipert, 1999; Report of the British Columbia Royal Commission, 1991), professional autonomy (Dunkin, Juhl, Stratton, Geller, & Ludtke, 1992; Hamilton, Gillies, Ross, & Sullivan, 1997; Hays, et al. 1997; Kazanjian, et al. 1991), the scope of practice (Hamilton, et al.; Hays, et al.; Hegney, 1996a), and community safety (Hays, et al.; Kazanjian, et al. 1991; Leipert). The literature on retention identifies and examines factors that influence the satisfaction of rural professionals in their professional practice, their community, and how rural living affects their family. Satisfaction with the factors in these three areas strongly

leads to retention (Dunkin, Pan, Muus, Harris, & Geller, 1994; Dunkin, Stratton, Harris, Juhl, & Geller, 1994; Hays, et al.; Kazanjian, et al. 1991). The complexity of retention lies in the fact that the same factors can be perceived as satisfying for some and as dissatisfying for others, such as the scope of practice or size of the community. Therefore retention factors can not be assumed to be the same for all health care professionals. Retention factors that have been identified for American public health nurses may not represent public health nurses in British Columbia because of the differences in job descriptions and in the health care delivery systems.

As the demand for community health care increases, there is a need to know what will keep nurses working in their communities (Canadian Nurses Association, 1998). Most of the research linking retention to job satisfaction has studied hospital nurses (Association of Nurse Executives of Metropolitan Toronto, 1991; Canadian Nurses Association; Dunkin, Stratton, et al. 1994; Layton, 1998; Kazanjian & Wood, 1993; Stamps & Piedmonte, 1986). These have been predominantly urban studies done in the United States. Dunkin and colleagues' examination of rural public health nurses in the United States has established that public health nurses have more job satisfaction than hospital nurses (Stratton, Dunkin, Juhl, & Geller, 1995) and both job and community satisfaction for rural public health nurses are important for retention (Dunkin, Pan, et al. 1994; Dunkin, Stratton, et al.). The survey tool they used has not been tested in a Canadian setting.

Purpose

The purpose of this study is twofold. First, it identifies and examines the satisfaction that public health nurses perceive in their nursing practice and their community. Second, it examines the relationship of job satisfaction and community satisfaction to public health nurses' decisions to stay in their current jobs in rural British Columbia.

Definitions

In this research, retention and rural are key terms. There is no consensus on the length of time that represents retention (Cutchin, 1997). As this study uses a previously tested survey tool from the study by Dunkin et al. (1992), retention is defined as maintaining experienced public health nurses in their current positions, to provide continuous community service for at least five years. It is considered that retention will not occur if public health nurses indicate they plan to leave their current position (Dunkin, Stratton, et al. 1994). Since this survey is only examining currently employed public health nurses, their intention to remain in the job for five years or more will be used as an indicator of retention.

Statistics Canada (Mendelson & Bollman, 1998) describes "rural and small town" as the population living outside the commuting zone of cities with an urban core of 10,000 or more. The British Columbia Rural and Northern Task Force (1995) has studied eight rural health regions that serve sparse populations distributed over large areas. These regions are generally referred to as rural. They are East and West Kootenay, Coast Garibaldi, Upper Vancouver Island,

Cariboo, Skeena, Peace River and Northern Interior. This research uses the same health regions. Most of the areas within these eight regions fit Statistics Canada's definition of rural. However, some communities within the regions do not because they have populations over 10,000. In this study these communities are referred to as non-rural. All others are referred to as rural.

Summary

This research describes the public health nurses who work and live in rural British Columbia. This study also brings attention to the job components and factors in the communities that are satisfying and dissatisfying to public health nurses. Consequently, this information is used to examine retention of public health nurses in rural British Columbia. Health authorities can use this information provided by public health nurses to develop workplace strategies and policies to promote and maximize retention. Retention of public health nurses ensures continuous and consistent public health nursing coverage in rural communities and does not divert health care spending away from these rural communities in recruitment costs.

In Chapter One the study is introduced. Chapter Two contains the literature related to rural public health nursing, job and community satisfaction and retention. The literature review is used to define the research questions. In Chapter Three the research method is outlined. The results are presented in Chapter Four. In Chapter Five the research is summarized and limitations are discussed. Implications for health authorities and health policy are presented.

CHAPTER TWO: LITERATURE REVIEW

Since job satisfaction and community satisfaction are recognized as correlates of retention of rural professionals (Canadian Education Association, 1992; Cutchin, 1997; Dunkin, Pan, et al. 1994; Dunkin, Stratton, et al. 1994), the literature review will present the most pertinent and current literature on these topics. The first section of the literature review, rural context, describes the rural community and the characteristics of rural public health nursing practice. In the second section, job satisfaction is explored using a theoretical framework for examining job satisfaction. This section also includes a summary of the current research of relevant variables used for measuring job satisfaction and their correlation with retention. In the third section, community satisfaction is defined and a literature summary identifies key variables in the relationship of the retention of rural public health nurses with community satisfaction.

The Rural Context

There is little agreement on the definition of rural (Bigbee, 1993; Bushy, 2000; Hewitt, 1992; Lee, 1991; Pitblado & Pong, 1999; Thompson & Alexander, 1998). The Northern and Rural Task Force (1995) described rural on the basis of landscape, economy and people. Common descriptors include sparsely populated, isolated communities, and great distances between populated centres (Bushy; Hewitt; MacLeod, Browne, & Leipert, 1998; Northern & Rural Task Force). The Task Force emphasized the effects that climate (e.g., winter weather) and geographical barriers (e.g., mountains and oceans) have on increasing distance from populated centres when accessing and providing rural

service (Northern & Rural Task Force). Rural employment often consists of a single resource base such as farming, logging, mining or fishing (Bushy, 2000). This resource base can greatly affect rural communities' economies when the commodity fluctuates (Northern & Rural Task Force), often causing unemployment and depopulation (Cater & Jones, 1989). Along with the rural characteristics of landscape and economy, the population found in rural British Columbia tends to be characterized by younger people and people with lower levels of education (Northern & Rural Task Force).

Several rural definitions exist and varying degrees of rural exist, such as rural remote or rural isolated. Rural definitions are used in the attempt to be objective and consistent in defining an area; thus researchers have used census data, population densities and distances. Pong and Pitblado (2001) have reviewed a number of Canadian rural definitions. The methodologies have been used in physician studies. There have been two major approaches. One approach had indices developed for specific distances from a major centre or tertiary hospital for example, Ontario Medical Association (Pong & Pitblado). The other approach stressed the geographical place and had less specific distance criteria using terms such as, adjacent to, as in the definition Rural and Small Town (Pong & Pitblado). Although, for doctors, the importance of considering distance from a major referral centre is understandable, it is not as important for public health nurses. Public health nurses do not provide acute care services. Therefore a rural definition that examines rural populations in general is feasible. Statistics Canada's description of "rural and small town" describes the population

living outside the commuting zones of communities greater than 10,000 (Mendelson & Bollman, 1998). This definition is applicable to British Columbia because much of British Columbia is rural and small town (Statistics Canada, 1998 cited in Mendelson & Bollman). The rural and small town description is used in this research to provide a consistent and well-developed rural definition useful for examining public health nurses in rural British Columbia.

Community

Rural and urban communities differ from each other. Tonnies' concepts of *Gemeinschaft* and *Gesellschaft* have been used by sociologists to describe the socialization within communities (Macionis, Benoit, & Janasson, 1999; Schaefer, Lamm, Biles, & Wilson, 1996). *Gesellschaft* refers to socialization within an urban centre where individuals do not know each other well but interact out of necessity, such as buying their groceries. *Gesellschaft* is impersonal, and reflects little sense of commonality among community members (Schaefer, et al.). In contrast, *Gemeinschaft* better describes rural communities where "people interact with a relatively small number of other people, whom they know well, in many different roles" (Ife, 1996, p. 16) and for the individual, "the public and the private [life] are not separated "(Ife, p. 16). Rural communities are made up of individuals and families who have ties of kinship or share basic work such as fishing or logging and its related services (Cater & Jones, 1989; McNeely & Shreffler, 1998).

Social aspects of the rural community have been identified in rural nursing practice. Insiders in a community share a similar culture and history (Cater &

Jones, 1989; Myers, 1998). New people stand out and it may take a length of time before they are accepted into the community (McNeely & Shreffler, 1998; Sutermaster, 1998). Nurses who are insiders are familiar and nurses who are new to the community are easily recognized, therefore, lack of anonymity in a rural community occurs with both insiders and outsiders (new people) in these circumstances (Bailey, 1998; Lee, 1998; Sutermaster). These are some of the aspects of rural communities that contribute to the unique characteristics found in rural public health nursing.

Rural Public Health Nursing Practice

Most rural nursing research has concentrated on the uniqueness of rural nursing practice in general (Bigbee, 1993; Hegney, 1996b; Weinert & Long, 1991). The differences between rural nursing and urban nursing are attributed to the effect the geographical setting and the interaction with rural people have on the nurses' practice in the rural environment (Bigbee; Bushy, 2000). Some of the factors that make rural nursing different are the broad scope of practice (Bigbee; MacLeod, et al. 1998; Rennie, Baird-Crooks, Remus, & Engel, 2000), autonomy (Bigbee), lack of anonymity (Bigbee; MacLeod, et al.; Rennie, et al.), familiarity with patients (Bigbee; Hegney, 1996b), isolation (MacLeod, et al.; Rennie, et al.), lack of peer support (MacLeod, et al.) and issues with remaining current in their nursing practice (MacLeod, et al.; Rennie, et al.).

The focus of public health nursing, whether public health nurses are rural or urban, is health promotion, illness and injury prevention, health protection, and community development (Canadian Public Health Association [CPHA], 1990).

This is a broad mandate. Public health nurses teach prenatal classes, visit newborn babies and their mothers, participate in wellness clinics, and provide presentations to schools and communities on a variety of health issues. They implement immunization programs for infants, school age children and adults, as well as providing health education and information for each age group. In their role of treatment and control of communicable diseases, public health nurses provide client education and treatment for specific diseases such as, sexually transmitted diseases, tuberculosis, Hepatitis A, B, C. As well, public health nurses collaborate with other professionals and groups to identify and address community needs. In the urban health unit, responsibilities for communicable disease control, adult health, schools and youth health, plus family health are divided among several public health nurses who gain an expertise in their specific area; however, in the rural office, the rural public health nurse does it all (Davis cited in Davis & Droes, 1993; Leipert, 1999).

A comprehensive literature search by Bigbee (1993) and Davis and Droes (1993) identified similar characteristics for rural nurses whether the setting was acute care hospital or community health office. From these studies, three main community factors affecting rural public health nursing practice were found. The first is familiarity: the nurses knew the community and were known by the community (Bigbee). This was also identified by public health nurses interviewed by Hegney (1996a, 1996b) in rural Australia. Also, Leipert's (1999) research on northern British Columbia public health nurses' perspective of their practice and women's health identified that public health nurses were able to know the people

well in their communities. Bushy (1996) described how familiarity contributed to continuity, such as prenatal classes followed by new baby visits. Hegney (1996b) found rural nurses provided service to their own friends and family; but the public health nurses in Leipert's (1999) study identified less extended family and identified that friends and neighbours substituted for extended family. Regardless how the nurses described familiarity, being known in the community, led to the second factor - a lack of anonymity for nurses including those in public health (Bigbee; Hegney, 1996b, Leipert, 1999). Rural nurses identified being consulted outside of work hours (Bushy, 2000; Hegney, Pearson, & McCarthy, 1997). Leipert's study confirmed that public health nurses were telephoned at home by people with health concerns. Thirdly, physical and professional isolation from public health nursing peers was recognized (Davis & Droes, 1993; Hegney, 1996b). Hegney (1996a, 1996b) found networking by telephone decreased professional isolation. Bigbee's (1993) search of rural nursing in general identified camaraderie between the existing staff, where there were a number of nurses working. But, Davis and Droes' search identified isolation as a common characteristic when rural public health nurses work alone and independently.

The main factors identified as contributing to uniqueness of practice were a broad range of knowledge and skills along with autonomy. In Leipert's (1999) study the rural public health nurses were described as generalists because they must be proficient in a wide variety of public health nursing programs that in an urban office are divided among several nurses (Bigbee, 1993; Bushy, 1996). An

earlier study by Leipert (1996) identified that urban public health nurses also need a broad base of knowledge because of the variety within their practice and the clients they see. However, researchers recognized that in a rural community, other roles are added to rural nurses (Bigbee; Clevett & Maltby, 1992; MacLeod, 1999). For rural public health nurses these could include administrative duties to keep the office functioning, supervision of clerical/aide positions, as well as answering the phone and booking appointments when there is no clerk.

Nonetheless, researchers (Bigbee, 1993; MacLeod, et al. 1998) have agreed that independence, autonomy, and a broad range of knowledge and skills are characteristic of rural practice. Davis and Droes (1993) identified that rural public health nurses have more independence and autonomy because they often work alone although they did not indicate how many sole practices were examined in order to make this conclusion. However, public health nurses in general, have described their practice as autonomous and independent (Leipert, 1996). Also, all public health nurses need a broad scope of practice and skills for their preparation and practice (CPHA, 1990).

It is evident that aspects of the rural community, such as familiarity and close personal contact, cannot be separated from rural public health nursing practice. As a result, public health nurses can perceive a characteristic as positive and satisfying or negative and not satisfying. For example, a lack of anonymity can be seen as a useful way to establish a relationship with an individual so that health teaching or promotion can occur (Leipert, 1999). On the other hand, the same characteristic can be perceived by rural public health

nurses as an intrusion into their private lives (Leipert, 1999). Consequently, it is how public health nurses perceive these unique characteristics of rural nursing that will influence their job satisfaction.

Job Satisfaction

Definition and Description

Job satisfaction cannot be captured in one idea. Job satisfaction is a subjective measure of how employees feel about their job overall (Cumbey & Alexander, 1998; McNeese-Smith, 1997). Therefore job satisfaction measurement needs to include the tasks and duties that make up the job, and with whom and how employees have interaction on the job (Cumbey & Alexander; McNeese-Smith). This multidimensional nature of a job makes the concept of job satisfaction complex (Blegen, 1993; McNeese-Smith). Job satisfaction therefore can be understood to be the perceived satisfaction employees have with all the various aspects of their job, including the skills needed to do the job, how they are supervised, how much they get paid, and the control they have over the job (Vroom, 1964).

Theory and Measurement

Job satisfaction is not totally captured by one theory. Although several theories of job satisfaction and job satisfaction measurement exist (Mueller & McCloskey, 1990; Stamps & Piedmonte, 1986), it is outside the scope of this paper to discuss the merits and to compare all of these. Instead, this paper will focus on the theoretical ideas that contributed to Stamps and Piedmonte's (1986) Work Satisfaction Index (WSI) for nurses. The WSI is presented because it is

the precursor for the instrument developed by the University of North Dakota (UND), (Dunkin, et al. 1992) which is used in the present study.

The development of the WSI utilized theoretical ideas from two main groups of theories, that of need fulfillment and social reference group (Stamps & Piedmonte, 1986). The need fulfillment theories claim that work must meet the needs of the employee (Stamps & Piedmonte). The theories of social reference acknowledge aspects of need fulfillment as well, but also explain job satisfaction as a reflection of how the employees see their job compared to other employees in other jobs (Stamps & Piedmonte).

The predominant theoretical ideas for the WSI measurement tool come from the need fulfillment theory group, in particular, Vroom's (1964) expectancy theory. Vroom's theory describes three aspects that have to occur for employees to have job satisfaction. These are: the job meets the employees' needs, the job components are valued by the employees and the employees believe that the desired outcome can occur. The determinants as set out by Vroom are supervision, the work group, job content, wages, promotional opportunities and hours of work. Vroom observed that:

> A work role most conducive to job satisfaction appears to be one which provides high pay, substantial promotional opportunities, considerate and participative supervision, an opportunity to interact with one's peers, varied duties, and a high degree of control over work methods and work pace (p.173).

Stamps and Piedmonte (1986) refined Vroom's broad determinants in designing their WSI to measure job satisfaction. Stamps and Piedmonte's determinants are professional status, task requirements, pay, interaction,

organization policies and autonomy. As mentioned, Stamps and Piedmonte incorporated social reference group theory into WSI but to a lesser degree. Since social reference is the employees' comparison of their situation with other employees, the WSI includes statements to this effect in the measurement tool. For example, "From what I hear from and about nursing service personnel at other hospitals, we at this hospital are being fairly paid." (Stamps & Piedmonte, p. 45).

The limitation of a job satisfaction measurement tool is that respondents are limited to the items on the questionnaire. Even though an accurate tool can be developed (Stamps & Piedmonte, 1986), some items may not be important or valued by the respondents. The conceptual strength of Stamps and Piedmonte's job satisfaction tool is the provision for the respondents to indicate whether the job satisfaction item is important or valued by them. This gives a fuller picture of job satisfaction. The use of Vroom's (1964) theory is demonstrated in this approach, that is the job component has to meet the employees' needs and the same component has to be valued by employees.

Stamps and Piedmonte's (1986) WSI has been criticized because of its length, its use of two measurement scales, and its complicated scoring system (Mueller & McCloskey, 1990). However, the UND job satisfaction questionnaire builds from the strength of WSI, by simplifying the evaluation and scoring of satisfaction and the importance of each job and job related item. Also, UND simplifies the wording of the statements. UND uses the six job determinants from WSI and adds a seventh determinant, benefits and rewards, to examine

nurses' job satisfaction. Therefore, UND work determinants to evaluate job satisfaction are professional status, task requirements, salary, benefits and rewards, organizational climate and autonomy.

Summarizing, there are many job satisfaction theories that are used as frameworks for job satisfaction measurement tools (Dunkin et al. 1992; Mueller & McCloskey, 1990; Roedel & Nystrom, 1988; Stamps & Piedmonte 1986). It is commonly recognized that the theory and consequently the measurement tool must examine job satisfaction as a multidimensional construct (Dunkin et al.; Mueller & McCloskey; Roedel & Nystrom; Stamps & Piedmonte). Vroom's (1964) theory captures the multidimensional aspects of job satisfaction and claims that job satisfaction is more likely when the determinant that is satisfying is also important to employees. As a result, identifying determinants that are valued or important to employees but are not meeting employees' expectations or satisfaction, gives direction to organizations to address those determinants (Mueller & McCloskey; Stamps & Piedmonte). The WSI and subsequently the UND measurement tool addresses actual satisfaction and the importance (or value) attached to each determinant by employees giving researchers a more comprehensive understanding of nursing job satisfaction.

Retention

Retention, keeping the existing nurses working, is one strategy to reduce unfilled positions and disruption of public health nursing service (CNA, 1998). There is no agreement on the number of years, 5 or 10 years, that denotes retention (Cutchin, 1997). However, Dunkin et al. (1992) have specified five

years for retention in their research. Retention has also been described as a process of integration of the person within a rural community (Cutchin). Although this process was describing rural physician retention, the same conceptualization can be used to explain retention of rural public health nurses. Therefore integration into the community occurs when the public health nurse personally and socially fits into the rural nursing practice, and then functions within the dynamics of the whole community (Cutchin). Examining the integration process of retention for public health nurses is outside of the scope of this study. This study is interested in retention as the number of years public health nurses have been working and their intent to remain in their job.

Job satisfaction and retention

Employees stay in their jobs because they are satisfied (Vroom, 1964). Hence, the consistent predictor of retention is job satisfaction (Blegen, 1993; Cumbey & Alexander, 1998; Mueller & McCloskey, 1990; Stratton, et al. 1995). This consistent use of job satisfaction to predict retention has led researchers to identify a great number of variables to measure job satisfaction. Nevertheless, there is limited information on job satisfaction and its influence on rural public health nurses to continuing to practice in rural locations (Cumbey & Alexander).

Relevant Research

Many of the variables used in measuring nursing job satisfaction and nursing retention have been identified from urban studies. Therefore, to help define variables that would be appropriate to measure job satisfaction and retention for rural public health nurses, the general rural health literature on job

satisfaction and retention of rural health care professionals is presented. The bulk of this rural research concentrates on rural physician retention. Three of these rural physician studies demonstrated some of the difficulties in rural retention research. A descriptive analysis by Hamilton et al. (1997) identified what rural physicians in rural and remote islands off the coast of Scotland liked and disliked about their practice. Although, the findings from this study were useful in defining positive and negative factors of rural practice, no firm conclusions could be drawn about retention.

Another descriptive study, Hays et al. (1997), examined the perceptions of rural practice on the part of physicians who had left rural Australian locations. This study identified some of the pitfalls in research about physicians who have left rural practice because some physicians lacked forwarding addresses and some had moved out of the country. Kazanjian et al. (1991) skirted the relocation problem by sampling physicians actively practicing in rural British Columbia. She examined their practice satisfaction and their intent on staying or leaving rural practice. These three studies demonstrated that rural retention studies with their small numbers of physicians needed to target all the physicians to have a representative sample. Hays et al. had 25 respondents which was a 68% response rate, Hamilton et al. (1997) had 65 responses which was a 80%, response rate and Kazanjian et al. (1991) had 702 responses which gave 59% response rate.

From these studies, similarities emerged in what physicians liked about their practice, whether they were planning to stay or leave, currently practicing or

had already left. These similarities were autonomy (Hamilton, et al. 1997; Hays, et al. 1997; Kazanjian, et al. 1991), work variety (Hamilton, et al.; Hays, et al.; Kazanjian, et al. 1991), continuity of care (Hamilton, et al.; Hays, et al.; Kazanjian et al. 1991), opportunity to use clinical skills (Hays, et al.), and level of responsibility (Kazanjian, et al. 1991). Therefore, these studies found that physicians identified positive aspects of their practice even when they intended to leave or had already left their rural practice. As well, these studies identified variables that were the same as the practice characteristics identified by Bigbee (1993) and Hegney (1996b) for rural public health nurses, in particular, autonomy, continuity of care, and a generalist role using a broad range of knowledge and skills.

The same physician studies identified the factors considered to detract from professional practice satisfaction. The factors considered by physicians to be negative were lack of anonymity (Hamilton, et al. 1997; Hays, et al. 1997), professional isolation (sole responsibility) (Hamilton, et al.; Hays, et al.; Kazanjian, et al. 1991), ability to secure uninterrupted free time (Kazanjian, et al. 1991), and lack of academic opportunities (Hamilton, et al.; Kazanjian, et al. 1991). These detractors for physicians contributed to heavy work loads, long hours and the feeling of never being off duty (Hays, et al.) Again, some of these factors considered to be dissatisfying to rural physicians about rural practice have been identified as characteristics that make rural public health nursing unique, specifically, lack of anonymity and professional isolation (Davis & Droes, 1993; Hegney, 1996b).

The study by Kazanjian et al. (1991) was the most comprehensive of the three discussed because these researchers compared rural physicians' satisfaction with practice, community and personal life with their urban counterparts. Consequently, Kazanjian et al. (1991) found that there was no significant difference in satisfaction levels between rural and urban physicians in autonomy, work variety, and continuity of care. The study concluded that urban physicians were generally more satisfied with their professional practice, community and personal family situation than rural physicians. Rural physicians were more likely to give personal and family reasons for leaving their rural practice than professional dissatisfaction reasons. In Kazanjian's et al. research, rural physicians were twice as likely to plan to leave their community in one year as compared to their urban counterparts. This study supported the contention that there are other issues affecting retention than practice satisfaction.

Similarly, a research study of Australian rural mental health workers by Wolfenden, Blanchard & Probst (1995) identified factors that mental health workers perceived to be satisfying and dissatisfying about their rural practice. The study had three major weaknesses. The sampling criteria was rural mental health workers but the majority of the respondents were located in areas of population greater than 10,000 and the majority of respondents did not work alone; as well, the reliability of the instrument was not established (Wolfenden, et al.). Even with these limitations the results revealed some similar satisfying practice factors for rural mental health workers and rural physicians, including variety and scope of practice, opportunity to use skills, autonomy, continuity with

clients, and opportunity to be innovative (Wolfenden, et al.). Another positive aspect identified in this study was teamwork (Wolfenden, et al.). However, this factor was different from the factors identified by physicians. This could reflect the size of the community involved in the study. Likewise, these mental health workers had similar job detractors as the rural physicians including, heavy workload, lack of continuing education and career development (Wolfenden, et al.). In summary, these studies found that professionals have similar practice characteristics that are regarded to be positive to practice and others that are detractors to professional practice.

Two meta-analyses were reviewed because of their usefulness in determining which job satisfaction variables identified from the various nursing studies can be generalized to the general nurse population. Blegen's (1993) meta-analysis identified the variables of stress, commitment, communication with peers and supervisors, autonomy, recognition and routinization as statistically significant variables in measuring nursing job satisfaction. This study used 48 studies of hospital and/or urban nurses, with only three of these studies including public health nurses as subjects. One of the three public health nurse studies (Lucas, McCreight, Watkins, & Long, 1988) included licensed practical nurses; this level of nurse is not employed in public health nursing in British Columbia. A meta-analysis of 68 studies completed by Canadian researchers examined job satisfaction, behavioural intentions and turnover of nurses (Irvine & Evans, 1995). There was no indication that any of the studies involved public health nurses. This study concurred with Blegen's research about the variables that

were connected with job satisfaction. These were variables related to job content that is, autonomy, routinization as well as, work environment variables of stress, and supervisory relationship. Irvine & Evans found these variables had stronger correlations than the individual characteristics of age and work experience.

Irvine and Evans (1995) described turnover as a direct result of behaviour intention (stay, search or leave). They cautioned that because studies operationalized the behaviour intent in various ways that is, by intent to stay, or intent to search, or intent to leave a job, the relationships between behavioural intent, turnover and job satisfaction could be affected. However, a positive correlation was found between behaviour intention (stay, search or leave) and turnover. They found job satisfaction has a direct effect on nurses' behavioural intention, that is their decision making around staying, searching or leaving a job. This was a strong negative correlation. Therefore nurses with low job satisfaction are more likely to make decisions about leaving. There was a small negative correlation between job satisfaction and turnover.

Some hospital studies contributed to understanding the effect of organizational factors on nurses. These studies examined the effect that leadership styles had on job satisfaction (McNeese-Smith, 1997; Morrison, Jones, & Fuller, 1997) and the effect of leadership styles on the nurses' intent to stay (Fisher, Hinson, & Deets, 1994). All three identified that participatory and considerate supervision enhanced job satisfaction. Fisher et al. found that participative management and a communication style that allowed the nurses to voice their opinions and be included in decision making, were significantly related

to intent to stay. However the generalization of this finding is limited due to the low (24%) response rate. Even so, these findings are consistent with such variables as communication with supervisor (Blegen, 1993) and supervisory relationship (Irvine & Evans, 1995) identified in the meta-analyses. Another hospital study found nurses who had career development relationships, such as mentoring and coaching, were more satisfied with their jobs (Yoder, 1995). As well, correlations were found between the variables of age, length of service, years of experience and job satisfaction, with the variable, intent to stay. Unfortunately these correlations were low. Though these results were consistent with the variables of age and years of experience from the meta-analysis, the conclusions can only be generalized to hospital nurses.

An older study (Lucas, et al., 1988) identified as a study of job satisfaction of public health nurses actually was inclusive of everyone who worked for an American public health nursing department. Licensed practical nurses and public health nurse administrators were both included. There is limited applicability to British Columbia as one program, home health, was included which is not the responsibility of public health nurses in British Columbia. Nevertheless this study was one of the only studies looking directly at public health nurses. There were 741 participants with a response rate of 68%; notably, 56% of the respondents were public health nurses. This study did not examine retention, although the researchers admit that the purpose of the study was to examine the turnover rate of nurses. In this sample the mean age was 39.5 years, 80% were married and the nurses were involved with a mean number of 2.8 programs. Twenty nine

percent of the nurses had their baccalaureate degree in nursing. This study found that education positively affected job satisfaction. Unfortunately, the study does not provide descriptions of the job determinants. However, the top three job satisfiers were identified as the importance of the job, their interpersonal relations and their achievement. The determinant salary and benefits was rated low for job satisfaction. This study identified that nurses who took work home were less satisfied than nurses who completed their work on the job; about half of the nurses took work home to complete. This study is limited to identifying what public health nurses find satisfying and dissatisfying about their job.

More recently, Cumbey and Alexander (1998) examined the relationship of job satisfaction with organization variables for American public health nurses. They did not explicitly examine retention. There were 845 respondents, a 50.6% response rate. Some (3.6%) of the respondents were licensed practical nurses. The results identified that both participatory supervision and decision making with peers correlated significantly with job satisfaction; as did formalized supervision (policy and procedures). The demographic variables, number of years in nursing and the number of years in the particular health department, were significantly related to job satisfaction. Since these findings are consistent with the variables of supervisory relationship (Irvine & Evans, 1995) and years of experience (Blegen, 1993) identified by the meta-analysis, these two variables can be used with some confidence in measuring job satisfaction for public health nurses.

A number of rural nursing studies from the University of North Dakota's Rural Health Research Center had similar findings but can be categorized into

two areas: first, job satisfaction (Dunkin, et al. 1992; Juhl, Dunkin, Stratton, Geller, & Ludtke, 1993; Stratton, et al. 1995) and second, retention (Dunkin, Pan, et al., 1994; Dunkin, Stratton, et al., 1994; Pan, Dunkin, Muus, Harris, & Geller, 1995; Stratton, Dunkin, Juhl, & Geller, 1993; Stratton, Dunkin, Juhl, Ludtke, & Geller, 1991). All were quantitative studies with substantial size, $N = 258$ to $N = 556$, with reasonable response rates (57% to 89.5%). The studies predicting retention had a larger $N = 3514$ with a response rate of 40.3% (Dunkin, Pan, et al.; Dunkin, Stratton, et al.; Pan et al.). These studies represented hospital, home care and public health nurses from several American states. Most of these studies reported using the same 37-item job satisfaction measurement tool based on Stamps and Piedmonte (1986), the WSI, which measures seven job components.

These components have been defined by Stamps & Piedmonte (1986), Dunkin et al. (1992) and Stratton et al. (1995). Autonomy is the amount of decision making, independence, and control nurses have over their job. Task requirements are the tasks that are regularly done as part of the job. Salary is the perceived adequacy of amount paid for work done. Benefits and rewards are job-related benefits that could be tangible or intangible, and could recognize the nurses' achievements. Interaction includes cooperation, support and respect from peers, coworkers, and individuals in supervisory roles. Organizational climate refers to the personality of the work environment affected by management, leadership styles and program policies. Professional status is

described as the nurses' perception of the importance of nursing to themselves and the community.

Dunkin et al. (1992) examined the relationship between rural public health nurses' job satisfaction and retention. This study found that public health nurses rated their overall job satisfaction as 3.85 out of 5. Still, these public health nurses were not satisfied with some aspects of their job. These aspects tended to be work environment related and were identified as organizational climate and task requirements. However, 61% of the public health nurses intended to stay in their current job for five years or more. The top three job satisfiers were identified as professional status, autonomy, and interaction. The top three job items valued by public health nurses were professional status, salary, and autonomy. This study found that the major reason for public health nurses to leave was a personal reason, often relocating with their spouse. Unfortunately, this research study did not explore community satisfaction or discuss the influence of rural nursing characteristics on job satisfaction or retention. Yet Dunkin et al. speculated that these public health nurses may have "unique ties to a rural area" (p. 274).

Some of the demographic variables identified in the study by Dunkin et al. (1992) were similar to those of many other studies. The majority of the respondents were female (98%), married (89%), the average age was 39.75 and 43% had their baccalaureate degree in nursing. Dunkin et al. found the number of years worked impacted on overall job satisfaction, while higher education was related to satisfaction with task requirements and organizational climate.

Two other studies by UND demonstrated the consistent identification of the job satisfaction variables. Juhl et al. (1993) completed a comparison study of job satisfaction of rural public health nurses and home health nurses. There were 258 respondents, a 57% response rate. Nurses in both practice settings rated salary as least satisfying and professional status as most satisfying. Again, public health nurses' overall satisfaction was higher than home health nurses. Public health nurses in this study rated professional status, autonomy and interaction as the top three satisfiers. The top three items public health nurses rated as important or valued were interaction, salary and professional status.

Likewise, Stratton et al. (1995) compared job satisfaction of public health nurses, hospital nurses and skilled facility nurses. The sample was larger with 1647 respondents and a 40.3% response rate. Yet, the results were similar, only the ranked order was different. The top three job satisfiers were professional status, professional interactions and autonomy. Again, the top three job components valued by public health nurses were salary, professional status and professional interaction. Only autonomy was a recognized variable from both of the meta-analyses. Even so, the consistency of these four job satisfaction variables: professional status, autonomy, interaction and salary identified over the three studies lends confidence in using these variables to measure job satisfaction for public health nurses.

Dunkin, Stratton, et al. (1994) examined the factors that were significant to rural nursing retention. In this study, Dunkin, Stratton, et al. introduced the concept of community as a factor in rural nurse retention and examined the

relationship of community satisfaction to retention. The sample of 3,514 nurses was large enough to propose retention models for three different practice settings. There were 516 public health nurses who provided data that led to a retention model for public health nurses. First, the variables were examined to determine what variables significantly impacted on job satisfaction. These variables were: existence of alternative nursing and non-nursing employment, satisfaction with present position, satisfaction with their communities, and whether public health nurses were leaving their positions due to personal or professional reasons. Second, the variables were examined to identify which ones significantly impacted on retention. The study identified that only satisfaction with nursing income impacted directly on retention. Finally, job satisfaction was significantly correlated to retention. Again, public health nurses had the most overall job satisfaction compared to nurses in the other two practice settings. Dunkin, Stratton, et al. found that public health nurses were more satisfied with their job when other nursing opportunities existed and when there were few non-nursing opportunities from which to choose. They also found that community satisfaction influenced job satisfaction. As well, nurses who indicated that they were leaving their nursing position for personal reasons were more satisfied with their job than were the nurses who indicated that they were leaving their nursing position for professional reasons.

A comprehensive rural nursing study from Australia, by Hegney et al. (1997) included rural community health nurses in describing rural nursing practice and examining the relationship of rural nursing variables to job

satisfaction. Data were collected in a variety of ways: 30 were interviewed face to face, 42 were participants in focus groups, and 29 were interviewed by telephone. Finally, nurses were accessed through 129 facilities. This resulted in 362 responses to questionnaires. Only 20% of the face to face interview and focus group participants were community health nurses. Most results were reported collectively; therefore, the larger number of non-community health nurses might obscure interesting findings for community health nurses. As well, even though the job of community health nurses was described as a prevention role, this role may not be the same as public health nursing in British Columbia. The strength of this study was the exploration of a rural nursing population. The average age of these respondents was 38 years and 92% were female (Hegney, et al.). These nurses identified their co-workers, the variety of practice and their responsibility as the top three job satisfaction variables.

Several rural nursing characteristics became apparent in the research by Hegney et al. (1997). Both community health nurses and hospital nurses in this study identified having local knowledge of the community and the people as a positive aspect of rural nursing. An aspect of this familiarity, lack of anonymity for the nurses or feeling they were never off duty, was reported by 52% of the nurses as "not a problem". Autonomy was described by 87% of the rural nurses as a positive aspect of rural nursing; however, seven percent felt autonomy was a negative aspect because it indicated to them a lack of support. Furthermore, 35% of rural nurses perceived the rural practice characteristic of isolation to be a

problem. The nurses' concerns with isolation were lack of services and professional isolation.

Other rural nursing characteristics identified in the study contributed to stress (Hegney, et al. 1997). Rural nurses identified themselves as generalists and identified skill variety as satisfying. However, rural nurses felt their practice was not valued by other nurses and the public because of this broad scope of practice. Furthermore, public health nurses in the study felt that their role was not understood by their hospital colleagues. Fifty-nine percent of the nurses in this study agreed that continuing education was a problem citing distance, work coverage and costs as barriers. Consequently, three stressors identified by rural nurses due to these rural nursing characteristics were lack of recognition of skills, having an extended role, and the ability to stay current in their practice. Other stressors found in this study were lack of staff, high work load, restructuring the health services, low wages, limited career choices, lack of support services and driving in rural areas. Specific to community health nurses, this study found driving described as hazardous because of the poor conditions of the roads plus these nurses were without communication when travelling either due to the nurses not having a mobile phone or the mobile phone being out of range.

This same study identified that the major reason nurses stayed in rural practices was because of their partners' employment and next, because either the nurses were born there or had family in the area. Hegney et al. (1997) found that 55% of the nurses were raised in rural areas; this is consistent with an earlier study by Dunkin et al. (1992) who found 61% of the community health nurses

were raised in communities of populations of 2500 or less. A demographic variable that affected job satisfaction in Hegney's et al. (1997) was age, that is, the older the nurse was the greater the job satisfaction. The variables that were significantly correlated either positively or negatively to job satisfaction were employer support and relationships with doctors and other allied health care professionals. Hegney et al. did not find a significant correlation between job satisfaction and the variables of tenure in present job, total number of years worked as a nurse, and full-time or part-time positions.

Job satisfaction research specifically related to retention for Canadian public health nursing practice was not found. Rather, the Canadian research examined various aspects of job satisfaction. Reutter and Ford's (1996) qualitative study of 28 rural and urban Canadian public health nurses' described the nurses' experiences and feelings about their public health nursing practice. These public health nurses identified that their job satisfaction came from believing their work was valuable and worthwhile to clients, families and communities. They enjoyed their job because they liked the variety the generalist role gave them and the autonomy and independence that existed in their practice. This generalist role was noted, even when public health nurses were working in a specific program area, due to the variety of clients, families and communities. The negative aspects of public health nursing were identified as work overload, insufficient time to complete the work to their satisfaction, and frustration with complex clients. This contributed to stress. These public health nurses perceived that their role was not understood by the public or other

professionals, a similar finding to Hegney et al. (1997). The notable difference between rural and urban public health nurses was that rural nurses said they filled gaps when other services did not exist, such as mental health counselling.

Two studies by Leipert examined public health nurses in British Columbia. One study (N = 10) involved northern and rural public health nurses (Leipert, 1999), while the other (N = 11) had an urban setting (Leipert, 1996). Leipert investigated the practice of public health nurses and public health nurses perceptions of community health respectively. The rural public health nurses described some disadvantages to rural practice and living. These were decreased opportunities to access educational resources, difficulties imposed by travel and weather, the feeling of isolation, the cost of living and limited cultural experiences. These nurses felt there was not enough public health nurses or time to do the work adequately. Some did not like the consequences of being easily recognized while others felt this was an advantage. The advantages identified by these nurses were their perception of making a difference, familiarity with the community, the variety in skills, friends, safety and more chances for sport and recreational activities. The public health nurses in the urban study identified the importance of public health nursing now and in the future to the community. These nurses recognized the aspects of collaborating with others and their autonomy gave them job satisfaction. As well, they acknowledged they needed a broad range of knowledge to practice public health nursing. These two studies did not examine retention.

Tomich (1993), in an unpublished Master thesis in Nursing, examined the perceived levels of job satisfaction and role conflict reported by public health nurses (N = 123). This study was a mailed survey to a random selection of all public health nurses in British Columbia regardless of geographic location. The average age of the respondent was 41.21 years, job tenure was 7.69 years and 78.9% had their baccalaureate degree in nursing. This research used three instruments: two instruments were well-established measurement tools (for example, McCloskey-Mueller Satisfaction Scale), the third tool measuring demographics was researcher devised and had not been tested. The results indicated that public health nurses in British Columbia had, at the time of the study, an overall job satisfaction rating of 3.56 out of five. The top three satisfiers were co-workers, scheduling and extrinsic rewards. The extrinsic rewards included salary, vacation and benefits. Tomich's finding that salary was satisfying is contrary to research by Dunkin et al. (1992) and Woodcox, Isaacs, Underwood, and Chambers (1994) who identified that the component salary was dissatisfying to public health nurses. Tomich's inclusion of vacation and benefits with salary may have modified the public health nurses' perceived satisfaction with salary. The least satisfying category in Tomich's study was professional opportunities. The research results indicated that public health nurses in British Columbia had a moderate level of role conflict and this role conflict decreased job satisfaction.

Some studies of public health nurse examined organization factors and stress. An Ontario study by Woodcox et al. (1994) examined public health

nurses' perceptions of job design, job satisfaction and stress due to organizational changes from a generalist practice to specific target population practice in an urban area. The study tools were administered four times; on the first administration 92 public health nurses completed the instruments for a response rate of 80%; the subsequent administrations had 54 respondents for a response rate of 58%. This study did not support the hypothesis that satisfaction for the public health nurses would increase (moving from a generalist practice to a focus group practice) in their job (work, pay, promotions) and job design (skill variety, task identity, feedback) or that there would be a decrease in stress due to the organizational changes. However, the public health nurses did rate their satisfaction with job (5.1 out of 7) and job design (5.9 out of 7). The top three job satisfaction variables were their co-workers, their supervisor, and their work. They were least satisfied with their pay. The three top satisfiers for job design were autonomy, skill variety, and significance of their job. They were least satisfied with task identity.

Stewart and Arklie (1994) examined stressors, job satisfaction, support and burnout for public health nurses in Nova Scotia. All 101 respondents were female, 72.3% were between 31 and 50 years old and 68.3% were married. The top three stressors were insufficient time for client care due to required non-nursing tasks or heavy work load, poor work environment due to no opportunity to voice anger and frustration or lack of value placed on work, and difficult clients. Other stressors that were mentioned were lack of support from supervisors, being responsible for a large number of programs, unclear role definitions, and

conflict with other service providers. Also, this study's identification of stress due to poor driving conditions was consistent with findings from Hegney et al. (1997). Public health nurses described job satisfaction in having their work valued by clients, their independence of practice, and their provision of quality care. These findings are consistent with other studies (Leipert, 1996, 1999; Reutter & Ford 1996). Stewart and Arklie found that public health nurses who had increased work-related support had increased job satisfaction and decreased stress and burnout.

Recent research from Saskatchewan studied the perceptions of front-line registered nurses about their job, what retains them and why they would leave their jobs (Remus, Smith, & Schissel, 2000). The response rate was 47% (N = 631). Public health nurses were included with all community nurses, for example nurses in nursing stations and doctors' offices. Seventy percent of the community nurses were from rural areas. Sixty-five percent of the rural community nurses reported they would stay in their current job. The study did not specify the length of time that the community nurse would stay, yet the study reported 40% of all rural nurses intended to retire in five years. The demographics of the nurses in this study described a stable but aging work force with 56% of the total sample employed in the same agency over 10 years and 64% of rural nurses graduating 20 years ago.

Remus et al. (2000) reported 12 factors identified by all nurses that would keep them in their jobs. First was personal satisfaction. Peers and job security were both rated second followed by supervision and family circumstances. One

factor, geographical location, was recognized as significantly more important to community nurses (83%) than institutional nurses. More significant differences were found between community nurses and institutional nurses than between rural and urban community nurses. The significant differences between rural and urban community nurses were the following. Rural community nurses felt it was less important to work in a clinical area of choice and it was less important to them to get along with their supervisor. This was probably due to the mix of nurses in the community group: some would not have immediate supervisors resident in their agency. Rural community nurses (96%) were recognized in public by their clients, as expected fewer (70%) urban community nurses were recognized by their clients. Although not statistically significant, it is interesting that 90% of rural community nurses indicated not being bothered by public recognition. Eighty-six percent of rural community nurses reported being asked professional advice outside of work, while 28% admitted consultation outside of work bothered them. Eighty-eight percent of the urban community nurses were consulted outside of work, yet only 19% reported this type of consultation bothered them. This sample demonstrated that public recognition was not dissatisfying but some did find consultation outside of work dissatisfying. These findings are supported by Hegney et al. (1997) and Leipert (1999). These community nurses were significantly happier with their independence and autonomy when compared to institutional nurses. This was similar to the result found by Stratton et al. (1995).

Public health nursing is unique, whether the practice setting is rural (Davis & Droes, 1993) or urban (Reutter & Ford, 1996). All public health nurses enjoy autonomy and the generalist role giving them variety in their practice setting (Leipert, 1996; Reutter & Ford; Woodcox et al. 1994). The difference in rural public health nurses' practice comes with the unique ties to the community (Hegney, et al. 1997; Leipert, 1999; Dunkin, et al. 1992). Therefore, the rural aspects of practice including continuity of care, knowing the community, and being known by the community lead to lack of anonymity which in turn can influence the job satisfaction of rural public health nurses.

Job satisfaction for urban nurses influences retention (Irvine & Evans, 1995); however, Dunkin et al. (1992) introduced some doubt of this relationship for rural nurses when 61% of the rural public health nurses studied planned to stay in their practice even though there were aspects of their job they did not like. Dunkin, Stratton, et al. (1994) found that community satisfaction was significantly related to job satisfaction and to retention. Finally, nurses who grew up in small towns or rural areas or have family connections in the rural area are more likely to stay (Dunkin, et al.; Hegney, et al. 1997).

Community Satisfaction

Community satisfaction and retention

Few of the articles on job satisfaction address the impact of community satisfaction on retention. This could be due to the fact that much of the research has been done in urban centers where changing jobs due to dissatisfaction does not necessarily mean changing where the individual lives (Dunkin, Stratton, et al.

1994). Undeniably, community satisfaction influences a "whole" picture of retention for rural public health nurses (Dunkin, Stratton, et al.; Dunkin, Pan, et al. 1994). Rural public health nurses who are happy with their community will be more satisfied with their job and will stay (Dunkin, Pan, et al.). Conversely, job satisfaction can influence personal satisfaction with the community (Filkins, Allen, & Cordes, 2000).

In rural British Columbia the choices and number of jobs can be limited; therefore, if public health nurses are dissatisfied with their job, the chances of finding another job within the same community may not exist. Dunkin, Stratton et al. (1994) identified that rural nurses are four times more likely to leave their job if they are dissatisfied with the community. Thus, dissatisfaction with a rural community influences people to leave the community (Filkins, et al. 2000). As a result, satisfaction with the rural community is an important factor in retention.

Description and Measurement

Community satisfaction is described as a subjective evaluation of the community given by residents of the community (Allen & Beattie, 1984; Allen & Filkins, 2000; Filkins, et al. 2000). The complexity of community satisfaction is demonstrated by the lack of consensus about what indicates community satisfaction (Allen & Beattie, 1984; Filkins, et al. 2000). Only the University of North Dakota studies specifically looked at the role of community satisfaction in the retention of rural public health nurses. The UND questionnaire had seven items examining community satisfaction. These were satisfaction with the community as a place: to live, raise children, build a new home, invest savings,

start a new business, worship, and to provide ample social opportunities. The UND operationalized the variable, community satisfaction, by presenting the mean score of these seven items (Dunkin, Stratton, et al. 1994). Since there has been no agreement on community satisfaction scales for public health nurses and the psychometric properties of the UND scale were not provided, these items may or may not measure community satisfaction for rural public health nurses.

Two large American studies in a predominantly rural state examined the issues of community satisfaction (Filkins, et al. 2000) and preferred places to live (Allen & Filkins, 2000). These studies had 3,264 and 6,500 participants. The term rural was described as non-metropolitan. These studies were not investigating how a specific sub population such as public health nurses perceived community satisfaction but rather what the general population identified as community satisfaction. Seventy two percent of the respondents in the study by Filkins et al. (2000) were male whereas the nursing research indicated that over 90% of nurses are female (Dunkin, et al. 1992; Hegney, et al. 1997). However Filkins et al. found that females usually had a higher community satisfaction score.

Filkins et al. (2000) identified some variables that predicted community satisfaction. The respondents who replied positively to these variables were most satisfied with their community. The variables were divided into four categories. First, the significant personal social/spirituality variables were family, friends and religion/spirituality. Second, the significant personal economic variables were job satisfaction and perceived financial security during retirement.

Third, in the category of personal characteristics, only the variable of age was significant. The older the respondents were, the more satisfied they were with their community. The fourth category examined the community attributes. The variables identified as significant were the social attributes of the community, that is the sense that the community was friendly, trusting and supportive, local government and education from Kindergarten to Grade 12. Other significant variables in this category were consumer services including retail shopping, restaurants and entertainment. Although all of the above variables were significant, Filkins et al. concluded the most important variables to influence respondents' community satisfaction were family, friends and religion/spirituality, and their perception of their community as friendly, trusting and supportive. These variables were more important than local government, consumer services and education. Interestingly, community size and basic medical services were not significant.

The second study, Allen and Filkins (2000), examined whether people were living in their preferred communities. These researchers found that individuals who were satisfied with community social attributes, consumer services and had the perception their community was tolerant to differences in public opinions were more likely to be living in their preferred community. Seventy-two percent of these respondents lived in or near towns and villages of less than 5,000 people. Two interesting points surfaced. The majority of the survey respondents wanted to live somewhere else and 73% of the respondents who lived in a town of less than 1000 people wanted to be closer to a city. Even

though the study found that rural residents preferred another community, there was no indication that this preference would motivate them to move.

One study was found that examined community satisfaction among a specific set of professionals. Freund and Sarata (1983) measured the community satisfaction of 120 psychologists in rural and non-rural Nebraska. Thirty-four rural psychologists - five of whom were female - participated in the study. The study identified that perceived community satisfaction increased the length of residency and the length of current employment. However, community satisfaction was lowest for rural psychologists. The psychologists who were satisfied with their lives were also satisfied with their work and community. This study did not support a correlation between work and community satisfaction. Comparisons of this research to the present study must be taken cautiously because of the age of the study, the predominantly male respondents and the difference in job description and service delivery method of psychologists to that of rural public health nurses.

Most of the literature examining the influence of community satisfaction on health care professionals has emanated from the research on rural physician retention (Hamilton, et al. 1997; Hays, et al. 1997; Kazanjian, et al. 1991). Kazanjian, Grams, Pope, and Whiteside (1998) revisited the original study by Kazanjian et al. (1991) to examine the written responses by the physicians and classify these responses to explain the physicians' decision to leave or stay in a community. Many of the physicians' responses corresponded with the community satisfaction model and the variables found by Filkins et al. (2000).

The responses by the physicians in Kazanjian et al. (1998) have been categorized using the community satisfaction research done by Filkins et al. (2000). The first category of variables to predict community satisfaction is classified as personal social/spiritual. The physicians who reported personal isolation and remoteness from family and friends perceived the community as dissatisfying (Hays, et al. 1997; Kazanjian. et al. 1991, 1998). Conversely, physicians who identified small town friendships as strong and supportive perceived their community more positively (Kazanjian, et al. 1998) and some physicians felt rural life gave their spouses and children quality of life (Kazanjian, et al. 1991).

Community attributes as described by Filkins et al. (2000) included the perceived attitude of the community, participation in local government, education, and entertainment. The physician studies by Kazanjian, et al. (1991, 1998), Hays et al. (1997) and Hamilton et al. (1997) reported both positive and negative aspects of the rural community. Some of the physicians liked the recognition and appreciation (Hays, et al.), quality of environment (Kazanjian, et al. 1991), a safe community (Hays, et al.; Kazanjian, et al. 1991), sense of community (Hamilton, et al. 1997; Kazanjian, et al. 1991) and opportunities for community involvement and leadership (Kazanjian, et al. 1991). Hamilton et al. found that physicians with young children described the rural environment as positive for bringing up young children and for their primary education. Other physicians were dissatisfied because of lack of educational opportunities for their older children (Hays, et al.; Kazanjian, et al. 1991). Likewise, cultural activities in rural

communities were found to be less satisfying to rural physicians compared to their urban counterparts (Kazanjian, et al. 1991, 1998). Some of the physicians found small town politics interfered with their practice (Kazanjian, et al. 1998). Kazanjian et al. (1991) identified that rural physicians were significantly more satisfied than urban physicians with their environment, safe community, sense of the community and their opportunities for community involvement. Even when physicians could identify positive factors in their community, Kazanjian et al. (1991) found that physicians left rural practices because of personal reasons.

Other community factors not identified in the community satisfaction model were reported by physicians. Physicians were dissatisfied with the limited or lack of career possibilities for their spouses (Hamilton, et al. 1997; Kazanjian, et al. 1991). Some identified dissatisfaction with housing (Hays, et al. 1997). Others did not like the distance they had to travel to get to larger centres (Kazanjian, et al. 1998). Consistent with the community satisfaction model of Filkins et al. (2000), Kazanjian et al. (1998) concluded that if physicians felt that positive community factors out weighed the negative community factors, the physicians were more likely to stay in their rural community. Although physician research gives some insight into rural community satisfaction, caution must be used in drawing conclusions for public health nurses because the role and employment situation of physicians is different than the role of public health nurses. Also, in these studies the participants were predominantly male. For example in the study by Kazanjian et al. (1991) 83% of the physicians were male, while public health nurses are predominantly female.

Canitz (1992) identified aspects of northern Canadian communities that contributed to nurses leaving these communities. Fifty-five nurses in her study provided all nursing services including public health nursing. Socially these nurses identified loneliness and isolation as dissatisfying and stressful. Nurses who belonged to an organized religion or were married reported less loneliness. Canitz argued that the nurses' religious affiliation gave them a sense of community and support. Also, nurses who identified community support and positive feedback from the community had lower loneliness scores. Likewise, nurses who lived in communities of 500 or more people reported less loneliness than nurses in smaller communities. Nurses who originally came from small communities felt more positive about their job. Filkins et al. (2000) did not find the size of the community to be significant in community satisfaction, however religious affiliation and support of the community are considered by Filkins et al. to influence people's perception of their community.

Canitz' (1992) research identified that nurses who had leisure time felt they had more personal and professional autonomy. Canitz argued that leisure time allowed the nurses some control over their lives plus they had more opportunities to interact and become familiar with the community. She argued that the positive community factors balanced the personal and work issues, relieving some stress and decreasing turnover of nurses. However, the lack of anonymity that other researchers have identified as an integral part of small town work, was not addressed by Canitz.

Summary

Community satisfaction and job satisfaction cannot be separated in rural communities (Dunkin, Pan, et al. 1994; Dunkin, Stratton, et al. 1994; Hays, et al. 1997; Kazanjian, et al. 1991). This concept is encapsulated in the quote, "The sense of responsibility to the rural communities, enjoyment of the clinical variety, autonomy and family lifestyle, and appreciation of assimilation into the community [are] powerful influences to stay" (Hays, et al., p.200). Consequently, research must look at these two concepts together when addressing the issue of retention of public health nurses in rural British Columbia.

The initial research by the University of North Dakota has provided a well-researched basis for investigating a Canadian perspective on the influence of job and community satisfaction on retention of rural public health nurses. Job satisfaction has been described throughout the literature as multidimensional and subjective. Some job satisfaction variables have been reported to be significant for urban hospital nurses. There is no firm indication that these same variables would be significant for rural public health nurses. However, rural public health nurses have identified autonomy, professional status, task requirements, benefits and rewards, interaction with co-workers and other health professionals, salary and supervision as affecting how they feel about their rural public health nursing practice.

Even though job satisfaction has been positively correlated with retention, identification of job satisfaction factors give only a description of what public health nurses like and dislike. Therefore, the relationship between job

satisfaction and retention has to be made explicit in order to draw any conclusions. The variables of "intent on staying" or "intent on leaving" can be used to examine a relationship for retention (Irvine & Evans, 1995).

Overall, the literature reviewed has shown that public health nurses were more satisfied than nurses practicing in other settings such as home care, and hospital. Consequently, when these nurses left their public health nursing jobs the reasons for leaving were not professional reasons (Dunkin, et al. 1992; Dunkin, et al. 1994; Hegney, et al. 1997). Therefore, job satisfaction has been found to be only one of several influences on retention for rural public health nurses.

The influence of the rural community on practice has been identified in the physician and nursing literature. For nurses, the challenges and demands of the rural community have been identified as satisfying because the nurses can have autonomy, use a wide variety of skills, and have continuity with their clients and community. However, at the same time there are drawbacks such as a decrease in personal privacy because of being known in the community. Some rural nurses reported feeling isolated socially and professionally.

Community satisfaction has been identified as influencing job satisfaction (Dunkin, Stratton, et al. 1994). Likewise, community satisfaction is recognized as keeping people in the community (Filkins, et al. 2000). Variables identified to examine rural community satisfaction have been friends, family, religion/spirituality, the supportiveness of the community, and the availability of education and entertainment. Therefore, a better understanding of retention of

rural public health nurses is provided if both community and job satisfaction are examined.

While studies examining rural public health nurses' job satisfaction and retention (Dunkin, et al. 1992) and the influence of community satisfaction on retention (Dunkin, Stratton, et al. 1994) have occurred in the United States, no study has been done to explore both these aspects for rural Canadian public health nurses. Although, rural and urban physicians in British Columbia have been studied to identify items they find satisfying with their practice and community (Kazanjian, et al. 1991, 1998), these results can not be assumed to describe rural public health nurses. Therefore, it is not known what rural public health nurses in British Columbia perceive as satisfying about their practice and their community and the influence of these two factors on retention. At the same time it is unknown if rural and non-rural public health nurses have different perceptions about their practice and community satisfaction.

Research Questions

As a result of the literature review the following research questions were formulated:

1. a. What job components do public health nurses in rural British Columbia identify as satisfying and important?

   b. Do rural and non-rural public health nurses differ in their satisfaction with specific job components or in their overall job satisfaction?

2. a. What community aspects are satisfying and what aspects are important in the community for public health nurses in rural British Columbia?

   b. Do rural and non-rural public health nurses differ in their satisfaction with specific aspects of the community or in their overall community satisfaction?

   These questions facilitate the answer of the more complex question:

3. How does job satisfaction and community satisfaction influence retention of public health nurses in rural British Columbia?

CHAPTER THREE: METHODS

In order to examine the research questions, this study employed the survey tool used by Dunkin et al. (1992) in their study of job satisfaction and retention of rural public health nurses. Similarities or differences between the American study and the present study are noted in the text where applicable. In addition, community satisfaction has been included because of the importance of both job and community satisfaction in retention of rural public health nurses (Dunkin, Stratton, et al. 1994).

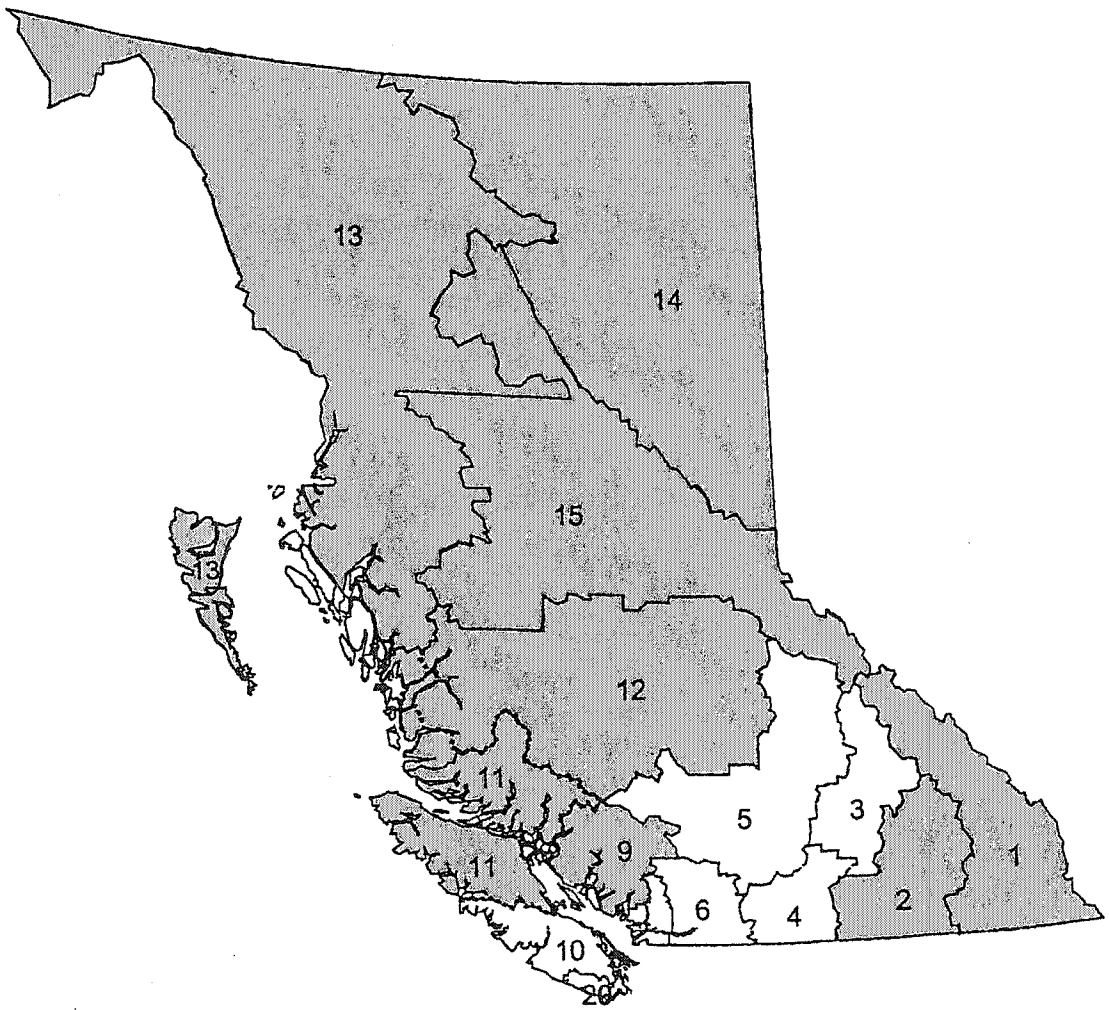
Design

The design of this study was a mailed questionnaire survey with two mailed follow-up reminders to all public health nurses in the eight regions identified by the Rural and Northern Task Force (1995). The first follow-up was a reminder letter only. The second follow-up included a reminder letter and a second questionnaire. This gave a 76% return rate of 124 responses (N = 164). Data analysis included descriptive and inferential statistics. The written comments of the respondents have been grouped and used to supplement the descriptive and inferential statistics.

Sample

The majority of the land area in British Columbia is "rural and small town" (Mendelson & Bollman, 1998). At the time of this research the province was divided into 20 health regions (Vital Statistics Agency BC, 1999a) (See Figure 1). The Regional Health Boards, Community Health Councils, and Community Health Services Societies (Vital Statistics Agency BC, 1999a) that operate the

health regions are collectively referred to as health authorities. However, in December 2001 the provincial health regions were restructured into five macro regions.



1 East Kootenay
2 West Kootenay Boundary
9 Coast Garibaldi
11 Upper Island-Central Coast
12 Cariboo
13 Northwest
14 Peace Liard
15 Northern Interior

Prepared by: Information and Analysis Branch, Ministry of Health and Ministry Responsible for Seniors Boundary Source: BC STATS, Ministry of Finance and Corporate Relations

(Vital Statistics Agency BC, 1999a)

Figure 1. Health regions surveyed in British Columbia

In general the health delivery services boundaries of these eight health regions have stayed intact within the macro regions with some changes to Coast Garibaldi and Cariboo (C. Ulrich, Chief Nursing Officer, Northern Health Authority, personal communication January 17, 2002). The macro regions of Northern Health Authority, Interior Health Authority, Vancouver Island Health Authority and Vancouver Coastal Health Authority have absorbed the eight regions studied during this research (Ministry of Health Planning, 2002).

Data collection was carried out December 2000 to February 2001 in the eight health regions recognized as rural by the Northern and Rural Task Force (1995). These regions were East Kootenay, West Kootenay-Boundary, Coast Garibaldi, Upper Island-Central Coast, Cariboo, North West-Skeena, Peace Liard, and Northern Interior (Vital Statistics Agency BC, 1999a). (See shaded areas in Figure 1) This area comprises 80% of the province and has a combined population of 733,243 or 18% of the provincial population (Ministry of Finance and Corporate Relations, 1999; Vital Statistics Agency BC, 1999b).

These eight health regions serve cities, small towns, and communities in rural British Columbia. In determining which health regions were rural, primary consideration was given to those regions with public health nurses who received isolation allowance as designated by the British Columbia Nurses Union (BCNU) contract. In addition to the isolation criteria, health regions were chosen by their inclusion in the Northern and Rural Task Force Report (1995). Although all have areas with populated centres, for example Williams Lake or Courtenay, much of these eight health regions meet the rural and small town definition. (See

Appendix A). Some of the health regions have had minor name changes since the Rural and Northern Task Force Report. For example, Skeena-Northwest is now known as Northwest and West Kootenay is now called West Kootenay Boundary.

The target population consisted of all the rural public health nurses working in areas classified as rural and small town and employed by health authorities in the eight health regions. The intent to target 100% of the population followed the procedure of Hamilton et al. (1997), Hays et al. (1997), and Kazanjian et al. (1991) because of the small population of rural public health nurses. Public health nurse managers themselves were not part of the sample because this research examined job and community satisfaction of public health nurses who provided the service at the client level in the community. In small rural offices the management position is not held by a public health nurse. Public heath nurses who are managers are usually in the largest office per region and do not have one on one contact with the clients in the community.

Thirty-eight offices satisfied the rural definition, that is, these offices were outside the commuting zones of larger urban centres. The single public health nurse office of McBride was excluded because this nurse was the researcher. The 37 "rural" offices included in the research employed 89 public health nurses. All of West Kootenay Boundary (formally West Kootenay) offices satisfied the rural definition of Statistics Canada including the larger centres of Castlegar, Nelson and Trail. The offices that fell within the rural definition ranged from 1 to 7 nurses per office.

Twelve offices did not meet the rural definition. The number of nurses in these "non-rural" offices ranged from 4 to 31. Of these 12 offices, Prince George office was excluded because it employed 31 public health nurses, a greater number than any of the other offices. Only two of these nurses served the outlying rural areas of Hixon and Bear Lake but they lived in Prince George. The researcher felt these nurses' perceived satisfaction with work and community would be altered because they did not live in the same area they served. Prince George is designated as a Census Agglomeration with 75,150 (Statistics Canada, 2000). Its population was approximately 20,000 larger than Courtenay, the next largest office in the sample (Statistics Canada). Therefore, 11 non-rural offices that did not meet the rural definition were included. The size of the offices ranged from 4 to 12 public health nurses. They were included due to the small number of public health nurses per office, remoteness from other large centres and ultimately because they were health units within the eight regions used by the Rural and Northern Task Force. These 11 non-rural offices were staffed with a total of 75 public health nurses. Examples of these offices are Fort St. John, Fort Nelson, Kitimat, Quesnel and Powell River. The total population of public health nurses in all the offices used for this research was 164 public health nurses. The actual number of public health nurses working in these offices was verified by each region's public health nursing manager.

Instrumentation

A modification of the University of North Dakota (UND) Rural Health Center questionnaire was used. Permission to use this questionnaire was given by T. Stratton (personal communication, April 19,1999) and J. Dunkin (personal communication, April 20,1999). The instrument, based on Stamp and Peidmonte (1986) WSI, was developed by the UND Rural Health Center (Dunkin, et al. 1992) and funded by the Office of Rural Health Policy, U.S. Department of Health and Human Services (T. Stratton, personal communication). It was a two-part questionnaire. The first 37 questions examined work satisfaction by having the public health nurse rate satisfaction and importance of each work-related item (Dunkin, et al.). These work-related items were categorized into seven subclasses that examine task requirement, salary, autonomy, professional status, interaction and organizational climate (Dunkin, et al.). These items were rated by the public health nurse on a 5 point Likert type scale, with 1 being the lowest and 5 the highest (Dunkin, et al.). The second part began with several community aspects to be rated by the public health nurse as to satisfaction and importance levels on a similar 5 point Likert type scale. This part also included demographics, family, rural practice setting items, and a question as to why a public health nurse practices in a rural setting. Another question asked if the public health nurse planned on staying and the reasons for leaving (Dunkin, et al.).

The wording of the UND questionnaire was generic for all areas of nursing. Some of the wording was changed to appropriately reflect Canadian

public health nursing including: shift was changed to hours worked; State was changed to Province; miles were changed to kilometres; patient was changed to client/family/community; and agency was changed to health unit (See Appendix B). This was to ensure that questions would not be left unanswered or interpreted incorrectly by the respondent. Two experienced rural public health nurse managers reviewed the changes in the questionnaire to ensure clarity of the wording. Also, three items were added to the question "Which benefits do you currently receive". These were isolation allowance, health unit vehicle, and cell/mobile phone.

The second section on community satisfaction was expanded to identify certain key characteristics in rural nursing such as, anonymity (Bigbee, 1993; Hegney, 1996b; Leipert, 1999) and isolation (Davis & Droes, 1993; Hegney, 1996b). Expansion of this section included questions such as "How satisfied are you with your anonymity?", "How important is your anonymity to you?, and "How satisfied are you with being asked work related questions outside of work?". "Do you feel socially, professionally or geographically isolated?" was also added. Other community satisfaction items were added such as "distance your community is away from a major centre" and "is your community friendly, supportive, trusting". At the conclusion of the questionnaire, space was provided and the respondent invited to comment on the job, community, and rural public health nursing in general.

Validity and Reliability of the Original Questionnaire

Dunkin et al. (1992) reported their questionnaire was tested in a pilot study of six health care agencies in a state not included in the UND research. The content validity was determined by asking nursing directors to comment on clarity and ambiguity (Dunkin, et al.). The internal consistency measure of the questionnaire was calculated separately for job satisfaction and job importance items of the questionnaire using Cronbach's alpha (Dunkin, et al.). Cronbach alpha coefficients were .876 for overall job satisfaction and .919 for overall importance. Table 1 displays the Cronbach alpha coefficients for the seven components of job satisfaction (Dunkin, et al.).

Stratton et al. (1995) used this questionnaire for a job satisfaction study of three rural nursing practice areas and reported Cronbach's alpha for overall satisfaction as .89 and Cronbach's alpha for overall importance as .94. This questionnaire was used by Dunkin, Stratton et al. (1994) for proposing retention models for three practice settings and reported the Cronbach's alpha for overall satisfaction as .89 and Cronbach's alpha for overall importance as .95.

Table 1

Alpha Coefficients for Satisfaction and Importance per Seven Work Components

Component	Satisfaction	Importance
task requirements	.595	.577
salary	.859	.819
benefits and rewards	.514	.671
autonomy	.666	.772
professional status	.350	.646
interaction	.652	.744
organization climate	.730	.683

Dunkin's et al. (1992) questionnaire was adapted from Stamps and Piedmonte (1986), however Stamps revised the questionnaire in 1997. To determine if Dunkin's et al. questions would have been different if the revised Stamps (1997) had been available, a review of Stamps and Piedmonte (1986), Dunkin et al. (1992) and Stamps (1997) was done. The review consisted of taking the questions used by Dunkin and comparing whether these questions had appreciably changed from Stamps and Piedmonte's 1986 questionnaire to the 1997 questionnaire. The questions Dunkin had used had not changed. The differences consisted of question order and negatively expressed questions changed to the positive (See Appendix B). Actually, Stamps had changed one question to the same wording as Dunkin. This researcher judged that the revised Stamps' questionnaire would not have changed the modification done by Dunkin (See Appendix B). The questionnaire by Dunkin et al. was retained because the emphasis of this study was job satisfaction for rural public health nurses similar to the research completed by Dunkin and colleagues.

Procedure

Initially, in September 2000, the questionnaire was sent to a senior public health nursing manager to check for clarity in adapting the wording to Canadian public health nursing. Due to this manager's review, another choice was added to question 62 which was "partner employed in/near community". This revised questionnaire was included in the proposal to the ethics committee September 2000. The ethics committee suggested a further change in wording in the questionnaire regarding lack of anonymity to level of anonymity. This was

accommodated by the researcher by adding question 43 "what is your level of anonymity". The questionnaire was reviewed again on October 30, 2000, by a second senior public health nursing manager. This manager questioned whether item C requesting information on number of full time equivalency (FTE) would be misinterpreted, that is, whether someone would interpret this as their own FTE or the collective FTE of their office. After further consultation with the chair of the committee this question remained the same. Permission from the Research Ethics Committee was granted to the researcher on November 7, 2000.

As previously arranged, the manager responsible for public health nursing in the Northern Interior health region was contacted November 12, 2000 to introduce the researcher and research to managers in the other seven regions by e-mail. The researcher then sent a cover letter and chart to all eight managers by e-mail on November 20, 2000. This letter and chart requested permission to survey, as well as verification of the location of each health unit, the numbers of public health nurses employed, and vacant positions (See Appendix C). Full responses were returned within the week (November 27, 2000) from 7 of the 8 managers. Telephone contact was made with the eighth manager via a voice mail message. By December 8, 2000 verbal consent was given for surveying the eighth health region.

The questionnaire was printed on coloured paper to make it stand out to the recipient. Blue questionnaires were sent to offices that fell within the rural definition and green questionnaires were sent to the larger offices that served within these eight health regions but did not fall within the rural definition (non-

rural). Only, the exact number of questionnaires, cover letters, and stamped self-addressed envelopes required for the sample were sent to each health unit address. All letters related to requests for assistance and consents are located in Appendix D. A separate single letter of introduction accompanied the questionnaire packages requesting that the questionnaires be distributed to each public health nurse.

The first mailing of the questionnaire to 7 of the 8 health regions took place on November 30 and December 1, 2000. The researcher called some offices prior to mailing to clarify that the number of nurses indicated on the chart did not include public health nursing assistant administrators (PHNAA) and to verify whether some casual positions were regular casual positions. Two offices contacted had different numbers than those submitted by the senior manager. Therefore the researcher went with the number indicated by the actual office. For example, one office that was also a health centre reported that although they did have that number of nurses, one of them did not actually do public health nursing. Questionnaire packages were sent by priority post on December 14, 2000 to the eighth health region.

A return chart was completed by a clerk receiving the returned questionnaires. All return envelopes were coded with a number to indicate which office had returned the questionnaire. This was done to track which office had not returned the completed questionnaire so that a reminder in the form of a letter or second questionnaire could be sent. The clerk also ensured that the health region was specified so that the researcher could ascertain whether there was

adequate representation from each of the eight health regions. The clerk was responsible for the removal of the completed questionnaire from the envelope and discarding the envelope to ensure anonymity. A return rate of 70% was the goal to ensure good representation and useful results (McMillan & Schumacher, 1997). This goal was surpassed.

A reminder letter which included a "thank you" was mailed out December 18, 2000 to seven of the eight health regions. The reminder letters were not sent to the eighth region because they had just received their questionnaires. The first set of returned questionnaires plus the reminder letter gave a response rate of 64% (105 out of 165). A second questionnaire with a cover letter which included another "thank you" and a stamped addressed envelope was sent out on January 3 and 4, 2001. The second mailing consisted of sending replacements for the exact number of questionnaires that had not been returned. Each office receiving replacement questionnaires was also provided with a cover letter explaining that this was an opportunity to participate if they wished to do so. The second mailing also prompted the return of some of the questionnaires from the original mailing. The envelopes of the second mailing were coded to distinguish them from the first mailing. This second questionnaire mailing produced another 20 questionnaires, increasing the response rate to 76%.

Five questionnaires were returned indicating the respondents did administration. Two questionnaires were from rural offices in a health region that did not have public health nursing administrators in rural offices. These questionnaires were kept in the sample. One of the respondents in a two nurse

office had written "public health nursing but manager lately". The second questionnaire in question came from a rural office with six nurses but this particular nurse served three different offices. After consulting with the senior public health nursing manager about the structure of the regional services for the specified region, this questionnaire was retained in the sample. In small rural offices public health nurses do much of their own administration, for example, statistics, reports and attending and representing public health at multi discipline meetings. The other three questionnaires were from non-rural offices: two of them indicated they did public health nursing combined with administration, the third indicated administration in a office with 13 nurses. Therefore the researcher removed this last questionnaire from the count of the returned responses because of the high possibility that this individual was exclusively administration. As well, one response was returned explaining that the unreturned questionnaire from that particular office was due to one of the public health nurses being on a year's leave. Therefore the overall return rate (Table 2) was adjusted to 124 returned questionnaires out of 164, that is, 76% response rate. The rural and non-rural response rate has been displayed in Table 3. The response rate for rural public health nurses is 76% and for non-rural public health nurses is 75%.

Table 2

Rate of Responses of Public Health Nurses per Health Region

Region	*n*	*N*	*P*
Kootenay East	17	21	81
Kootenay-Boundary	13	19	68
Coast Garibaldi	17	23	74
Upper Island-Central Coast	18	25	72
Cariboo	14	16	88
Northwest	23	32	72
Peace Liard	12	17	71
Northern Interior	10	10	100
Total	124	164	76

Although each region differs in the number of public health nurses employed the response rate from each region was good, ranging from 68% to 100%. When the rural and non-rural mix of public health nurses were compared the response rate for rural and non-rural was very close, 76% and 75% respectively.

Table 3

Rate of Responses of Rural and Non-Rural Public Health Nurses per Health Region

Region	Rural			Non-rural		
	n	*N*	*P*	*n*	*N*	*P*
East Kootenay	11	15	73	6	6	100
Kootenay-Boundary	13	19	68	0	0	0
Coast Garibaldi	11	17	65	6	6	100
Upper Island-central Coast	5	7	71	13	18	72
Cariboo	4	5	80	10	11	91
Northwest	10	12	83	13	20	65
Peace Liard	4	4	100	8	13	62
Northern Interior	10	10	100	0	0	0
Total	68	89	76	56	75	75

The data was double entered into an Excel spreadsheet file as questionnaires were returned and subsequently transferred into a Statistical Package for the Social Sciences (SPSS) data file (SPSS 7.5, 1996) for analysis purposes. All completed questionnaires were kept in a secured file drawer and will be destroyed six months following the completion of this study including any subsequent publications.

Data Analysis

Descriptive and inferential statistical analysis was used to interpret the data. To assure the anonymity of responses the data were reported collectively for the eight health regions or as rural and non-rural. Frequency distributions were used to tabulate demographic data and practice related data. Tables and figures were used to display the data. The importance measures have been only explored by descriptive analysis because of the difficulties identified with this aspect of the survey tool by the respondents and from experienced researchers (N. Stewart, Co-Principal Investigator, National Survey: Nursing Practice in Rural and Remote Canada, personal communication June 20, 2001).

Although the questionnaire was a previously used survey tool, alpha coefficients were done to examine each work component subscale and overall job satisfaction to determine if the scales would be reliable for this present study (Polit & Hungler, 1999). The present researcher had devised the subscales for each work component by reviewing Dunkin's et al. (1992) research and cross-referencing this to Stamps and Piedmonte (1986). Then, the researcher sent the subscales to Stratton to review for accuracy. Stratton felt the subscales were

accurate (T. Stratton, personal communication, June 8, 2000). The alpha coefficients were done to aid with verification of the subscales and determine the reliability of the scales. Dunkin et al. (1992) reported the mean scores of the job component subscales. The subscales did not have an equal number of items therefore it was surmised that the previous researchers had taken the mean to rate the satisfaction scores of the seven components. Therefore in this present research, to allow for comparison to Dunkin et al., the work component satisfaction scores (Table 23) and importance scores (Table 24) are reported by their means. Each item within the specific work components is examined for frequencies (Tables 15 to 21).

This present research also uses the sums of the subscales to have a total score for each work component. These total scores are used to compare differences between groups, that is rural and non-rural public health nurses. A MANOVA was used for this comparison to control for a Type I Error.

A community satisfaction scale was tested in this research. Content validity for the community satisfaction scale was determined from the pertinent literature (Dunkin, et al. 1992; Filkins, et al. 2000; Hegney, et al. 1997; Leipert, 1999; Kazanjian, et al. 1991) and the researcher's personal experience in a small rural village. The items reflected the commonalties among these sources. This researcher included specific items on, anonymity, being consulted outside of work, ability to stay current and distance to a major centre. Fifteen items were specific to the community, the sixteenth item asked the respondent to rate overall community satisfaction. The alpha coefficients were used to judge the internal

consistency of the community satisfaction scale. In order to make a shorter scale for future use, several combinations of community items were tested. The descriptive analysis and the importance scores on the community items were used to decide which items to delete from the original scale.

Each community satisfaction item has been compared between groups, rural and non-rural public health nurses. The independent *t*-test was used to determine differences between groups. To decrease the chance of a Type I error when a question had multiple parts, a conservative alpha level of .01 has been used.

Testing for differences between rural and non-rural public health nurses on any single item with continuous data, an independent *t*-test was done using the alpha level of .05. For example, this was done to test for significance for the variables of level of anonymity, age, and distance travelled to deliver service.

A Pearson product-moment correlation was used to determine relations between variables. Job satisfaction, community satisfaction and retention were examined to determine what relation existed. The nurses' intent to stay was the retention variable and the summed Likert type items were used for the overall job satisfaction and community satisfaction. The variable pairs, age and job satisfaction, age and community satisfaction, and number of years in the community and community satisfaction were examined.

The effect size as described by Cohen (1992) was used in the interpretation of the independent *t*-tests and correlations. The following boundaries were used. Cohen's *d* was described as > .2 small, > .5 medium,

and > .8 large. The descriptors for correlations were > .1 small, > .3 medium, and > .5 large.

The relation of job and community satisfaction to intent to stay (retention) was thoroughly scrutinized. ANOVAs were used to examine all of the cases, then used to reexamine the data with the casual employed public health nurses and the public health nurses over 55 years of age removed. Finally, comments from the respondents were utilized to understand the effect job and community satisfaction have on retention. The self reported comments ranged from point form comments, full paragraphs, to an extra page stapled to two of the questionnaires.

CHAPTER FOUR: RESULTS

The purpose of this research was to examine the satisfaction perceived by public health nurses in their job and in their community and the effect of this satisfaction on remaining in their practice in rural British Columbia. Section I describes the sample of public health nurses. Section II provides answers to the specific research questions: What job components do public health nurses in rural British Columbia identify as satisfying and important? What aspects of the community are identified as satisfying for public health nurses in rural British Columbia? What are the differences between rural and non-rural public health nurses in their satisfaction with their job and community? Finally, interpretation of the overall data is needed to answer the complex question; how does job satisfaction and community satisfaction influence retention of public health nurses in rural British Columbia?

Section I

This section is divided into the characteristics of public health nurses, practice related characteristics, and retention related characteristics. The demographics, family configuration, partners' employment and the size of the communities the public health nurses live in and work in, help to describe characteristics of rural public health nurses. The practice related characteristics give a profile of their educational preparation, employment status, size of office, and the distance travelled to deliver service. The retention related characteristics for the nurses are their perceived isolation, choice to practice in a rural setting,

intent to remain in their present position, benefits, and perceived employment opportunities.

The results are shown as valid responses for each question. However, the non-response rate per question is reported for the total sample. The average non-response rate per question is 5%, any non-response rate greater than this has been noted in the text.

An examination of public health nurses who are 35 years or younger has been included because these are the nurses who potentially have more work years left. This subset (n = 29) of the total sample is referred to as the younger cohort. No statistical difference was found between the rural and non-rural public health nurses in this younger cohort when examined for job and community satisfaction, aspects of isolation and intent to stay. Hence, any descriptive differences are reported collectively for the group. The younger group comprised only the respondents that reported their age (9% of the total sample did not identify their age); within this younger group occasionally one or two of the respondents omitted a question. Therefore no comments are made in the text regarding a non-response rate for the younger cohort group.

Characteristics of Public Health Nurses in Rural British Columbia

Gender and marital status. As expected, the majority of public health nurses in rural British Columbia were female and married. The respondents were predominantly female (99%). This sample followed the provincial profile that reported that a greater proportion of females than males were employed in community health. Although 7% chose not to indicate their gender this would not

have altered the predominate female ratio. The majority (90%) of the public health nurses in this sample were married or had partners.

Age of public health nurses. The age of the public health nurses in this sample is similar to the provincial profile as displayed in Table 4. However, the study population had a higher percentage (23%) of public health nurses under 35 years and a lower percentage (8%) of public health nurses 55 years or over than the provincial profile which had 15% and 17% respectively in these age categories (RNABC, 2001b). Although the majority of the sample is over 40 years, there are younger nurses entering public health nursing to maintain the mean age 43 (42.5 years) which is not notably different from the mean age 41.2 of public health nurses identified by Tomich (1993). In comparison, the mean age of nurses in Canada is 43.3 years (Canadian Institute for Health Information [CIHI], 2001) and in British Columbia the mean age is 44 years (RNABC, 2001b).

Table 4

Range of Ages for Public Health Nurses per Health Regions and Provincially

	The 8 Health Regions		Total Province [a]	
Years	*n*	*P*	*n*	*P*
< 25	2	2	3	<1
25 - 29	6	5	91	5
30 - 34	18	16	167	9
35 - 39	11	9	223	12
40 - 44	25	22	340	19
45 - 49	29	26	379	21
50 - 54	14	12	296	16
55 - 59	7	6	221	12
> 60	1	1	96	5

Note. [a]Data from Registered Nurses Employed in Nursing by Area of Responsibility in Direct Care and Age Group 1999 (RNABC 2001b)

There was no statistical difference between the mean age for rural public health nurses 43 (43.1 years) and non-rural public health nurses 42 (41.7) at an alpha level of .05.

Additional evidence of an older work force was demonstrated by examining the years the respondents were first licensed to practice, with 60% first licensed 20 or more years ago (See Table 5). Using five years as an indicator of retention and with 89% of these public health nurses licensed before 1995, this sample could be considered to have demonstrated retention in nursing. No definitive comment can be made because the respondents were not asked how many years in total they had been employed in nursing to enable this comparison.

Table 5

Number of Public Health Nurses by Range of Years when First Licensed to Practice as a Registered Nurse in Canada

Range of Years	*n*	*P*
1961-1965	6	5
1966-1970	9	8
1971-1975	17	14
1976-1980	39	33
1981-1985	7	6
1986-1990	16	14
1991-1995	11	9
1996-2000	13	11

Ages of dependents. The respondents identified their children and aged parents living at home with them. Two of the respondents identified that their parents were living with them. Thirteen percent of dependents were over 20 years old and 36% were teenagers, that is 13 to 19 years. Having older children was expected because the majority of respondents were over 40 years old.

Twenty-eight percent of dependents were children between 5 to 12 years and 17% were under 4 years old.

Spouse's employment. The three most common occupations for partners of public health nurses were professional (23%), forestry and related (17%) and trade (15%) displayed in Table 6. Considering that 10% do not have a partner the non-response rate for this question adjusts to 6%. The younger cohort had partners who were professional (33%), trade (15%) and labourer (15%). The number of partners employed in forestry and related fields (7%) was not as prominent with this younger cohort.

Table 6

Partner's Occupation for Public Health Nurses in the Health Regions

Occupation	*n*	*P*
Trade	16	15
Professional	24	23
Self-employed	11	11
Forestry and related	18	17
Management	6	6
Law enforcement	6	6
Labourer	11	11
Unemployed	4	4
Other	8	8

Sixty percent (n = 61) of the public health nurses felt it would be easy for their spouse/partner to find new employment if they relocated. Adjusting the non-response rate because of "no partners" gives a non-response of 8%. Assuming this 8% would split evenly with this yes or no question it appears that approximately two thirds of the public health nurses feel their partners are easily employable. The public health nurses were asked to indicate how much of their family income was represented by their salaries. Eleven percent did not respond

to this question. Sixty-eight percent of the public health nurses stated they earned 50% or less of their total family income. In contrast, 15% earned between 51% and 90% of their family income. Sixteen percent of the respondents earned 100% of their family income. This seemed reasonable when considering that 10% reported no partner and 4% reported their partner was unemployed.

Community size and years spent in the community. Half of this sample of public health nurses lived (50%) and worked (53%) in communities of 10,000 – 25,000 (See Table 7). Coverage of some small rural communities was from the larger offices in the area for example, Peace Liard. However, 11% lived and 8% worked in places with a population of less than 2,500. It can be surmised that some commuted to larger places to work.

Table 7

Percentage of Public Health Nurses per Size of Community for Birthplace, Currently Living and Working, and Partner's Childhood

Size of Community	<2,500	2,500-4,999	5,000-9,999	10,000-25,000	> 25,000
	P	*P*	*P*	*P*	*P*
PHN[a] born in	22	10	13	13	42
partner grew up in	18	11	12	21	38
PHN *currently living* in	11	16	22	50	1
PHN *currently work*	8	17	21	53	1

Note. [a]PHN in place of public health nurse

Approximately one quarter (22%) of the public health nursing sample was born in communities of populations under 2,500 while 18% of their partners grew up in communities of this size. This is a smaller percentage than what has been identified by other researchers. Hegney et al. (1997) found 55% were raised in rural areas while Dunkin et al. (1992) found 61% were raised in communities with population less than 2,500.

The number of years public health nurses have spent in their communities is displayed in Table 8. Seventy-seven percent of the public health nurses had lived in their present community for 5 years or more. Therefore most respondents were long term residents of their communities. This question had a 7% non-response rate. Forty-three percent of the younger cohort had been in their community less than 5 years and 25% had only been living in their present community for 5 years.

Table 8

Range of Years for Public Health Nurses per Residency in Their Community

Years	*n*	*P*
< 5 years	28	24
5 to 9 years	31	27
10 to 14 years	21	18
15 to 19 years	8	7
20 to 24 years	18	16
25 to 29 years	8	7
30 to 34 years	2	2

Sixty-three percent (n = 71) of the public health nurses reported they were satisfied to very satisfied with their community while 88% (n = 95) felt this issue was important to very important to them. Spouses' or partners' satisfaction with the community was also considered. Ninety- seven percent of the public health

nurses with spouses'/partners' responded to this question on partners' satisfaction with the community. Eleven percent of the public health nurses reported that their spouses or partners were dissatisfied to very dissatisfied with the community compared to 66% who felt their partners were satisfied to very satisfied with the community. However, 88% of the respondents felt their partners' satisfaction with the community was important to very important.

Practice Related Characteristics of Public Health Nurses

Some characteristics helped to describe the rural practice setting. The practice related characteristics were factors that affected the public health nurses' positions, such as educational preparation, employment status, length of employment in public health nursing, size of office, and the distance travelled to deliver service.

Educational preparation. As expected, 96% had their Degree in Nursing because a baccalaureate is a prerequisite for public health nursing in British Columbia. Fifty-three percent of the public health nurses received their degree secondary to their diploma in nursing.

Place of educational preparation. Fifty percent received their educational preparation outside of British Columbia, in particular Ontario (14%), Alberta (12%), and Saskatchewan (8%). Three percent were educated outside of Canada. The non-response rate for this question was 9%. Currently, "[British Columbia] supplies only 50% of its annual demand for registered nurses" (Solving Nurse Shortage, 2000, p. 4). This sample demonstrates a similar trend for filling public health nursing positions.

The respondents were asked to indicate the province they were first licensed to practice as a registered nurse (See Table 9). The numbers per province absorbed the number educated outside of Canada. Again, the predominate provinces were British Columbia (54%), Ontario (14%), Alberta (11%), and Saskatchewan (10%).

Table 9

Place First Licensed to Practice as a Registered Nurse in Canada

Place	*n*	*P*
British Columbia	63	54
Alberta	13	11
Saskatchewan	12	10
Manitoba	5	4
Ontario	16	14
Quebec	4	3
New Brunswick	2	2
Nova Scotia	2	2

Employment status. The majority of respondents were employed in permanent part-time positions (See Table 10). This followed the provincial profile, in general, half of the female registered nurses work part-time (RNABC, 2001b). Four percent of the respondents were in casual positions. The high non-response rate (12%) for this question was due to responses being omitted because the number provided could not be converted into an FTE. The younger cohort varied from this profile with 61% working full-time, 32% part-time and 7% casual.

Table 10

The Full Time Equivalency Worked per Public Health Nurses in the Health Regions

FTE	*n*	*P*
Part-time permanent	53	49
Full-time permanent	52	48
Part-time casual	3	3
Full-time casual	1	1

Length of present employment. Half of the respondents (47%) reported having worked in their present employment less than 5 years whereas the other half (54%) reported working from 5 to 31 years in public health nursing (See Table 11). Therefore, half of these employees have already demonstrated retention in their job. It is interesting to note that 51% of the public health nurses have lived in their community less than 10 years (Table 8). This appears to coincide with the 47% of public health nurses who have worked less than 5 years in their present position. Of the younger cohort 71% had worked in their present position less than 5 years while 25% had worked for 5 to 9 years in the same position, 4% had worked for 10 years in their current position. The younger cohort would appear to be the group to target for retention.

Table 11

Length of Employment per Years in Present Position

Years	*n*	*P*
< 5	53	47
5 – 9	33	30
10 – 14	13	12
15 – 19	3	3
≥ 20	10	9

Size of office. The office sizes ranged from sole practices (7%) to an office with 13 public health nurses (1%). The most common size of offices was 2-nurse offices, 6-nurse offices and 5-nurse offices at 22%, 21% and 16% respectively. As previously reported half of these positions would be part-time. There was 8% non-response. However, the examination of the younger cohort revealed 11% worked in single nurse offices, 21% worked in a 2 nurse office. Both the 5-nurse (18%) and the-6 nurse (18%) offices had the same proportion of younger public health nurses.

Distance to travel for service delivery. Public health nurses were asked to indicate the farthest they had to drive to provide public health nursing service (See Table 12). Eleven percent did not respond to this question. Since the majority (73%) travelled less than 70 kilometres to provide service it is not expected that this non-response rate would influence the trend seen in the results. Twelve percent travelled between 100 and 200 kilometres, however a few were travelling great distances, up to 600 kilometres to deliver service. On average the difference in travel between the rural and non-rural public health nurses was 20 kilometres. This difference was not important. The comments described the extreme travel experiences:

- I leave my family and travel approximately 300 kilometres away once per month for a week.
- I live in one place and my work is 4–500 kilometres away. I fly/drive there once a month for a week each month
- I don't like the long drive to get to this job especially on winter roads.

Table 12

Distance Public Health Nurses Travel for Service Delivery

Distance (km)	*n*	*P*
≤ 20	29	26
21 – 69	52	47
70 - 79	4	4
80 – 89	3	3
90 – 99	5	5
100 – 200	13	12
300	2	2
400	1	1
500	1	1
600	1	1

Summary

The results of this study indicated that the eight health regions surveyed have an older population of female public health nurses who have spouses or partners. Half of this sample have worked for five or more years in their present position and work in communities with populations of less than 10,000. Most of the public health nurses would be considered long term residents of their communities. Many of these nurses have had their educational preparation outside of British Columbia. The majority of public health nurses have partners who are employed as professionals or have employment in the forest industry. Fewer partners of the younger cohort work in the forestry industry. Two thirds of this younger group works full-time and a third are employed in a 1 or 2 nurse office.

Retention Related Characteristics of Public Health Nurses

Other characteristics were examined to determine what effect they might have on retention. These were: the nurses' perceived isolation, their choice to

practice in a rural setting, their intent to remain in their present position and whether there was attractive alternative employment. The public health nurses identified the benefits they received and rated the importance of these benefits.

Perceived geographic, professional and social isolation. Over half (64%) of the respondents felt geographically isolated. Fifty percent (n = 58) of the public health nurses indicated professional isolation, whereas, 46% (n = 53) reported social isolation. The non-response rate ranged from 6% to 7% giving these three items a similar response rate. The younger cohort demonstrated a difference from the total sample. The younger public health nurses reported feeling isolated geographically (83%), professionally (66%), and socially (62%).

Rural public health nurses (42%) felt they were socially isolated while 50% of the non-rural group felt socially isolated. The rural public health nurses reported professional isolation (51%) and geographical isolation (65%) while the non-rural group indicated 48% and 62% respectively. There was no significant group difference between rural and non-rural public health nurses on these three aspects of isolation with an alpha level of .05. The non-response rate for the rural group was 8% while the non-rural group was 5%.

The assumption was made that geographical and professional isolation may have some effect on the public health nurses' ability to stay current. Ninety-six percent (n = 106) of the respondents agreed that it was important to very important to remain current in their practice yet only 48% of public health nurses were satisfied to very satisfied with their ability to stay current in their practice. Even though the non-response rate varied between the aspect of "importance"

(11%) and the "satisfaction" (8%) the results depict a difference between the perceived importance of staying current to the perceived satisfaction with their ability to stay current.

Rural practice setting and acceptance of the present position. Two questions were asked to gain some perspective of why nurses chose a rural practice setting. These were "what factors led you to practice nursing in a rural area?" and "which factor played a greater role in influencing your decision to accept your present position?". Most respondents indicated more than one factor that influenced them to practice nursing in a rural setting. Some of these were the community (30%), partner (24%), job availability (21%) and family and friends (9%). Other reasons given were the autonomy and independence, the variety and scope of practice, and some indicated choosing a rural setting because of challenge and adventure.

The top three factors why public health nurses accepted their present position reflect the reasons they chose to practice in a rural area. These were job availability (32%), partner (23%) and community (15%). Ten percent indicated accepting the position because of the health care agency and 20% indicated the category "other". Some of the self reported comments for other were:

- opportunities for change and growth
- paid more
- no night shifts or weekends
- health promotion

The younger cohort was very similar to the total sample in their reasons for accepting their job. These were job availability (38%) and partner (30%), however the community was reported less frequently at 10%. It can be surmised that for the younger nurses, the chance to find employment was the motivating factor to accept their present position.

Planned tenure for public health nurses. Tenure examined how long public health nurses would be committed to their present position (See Table 13). The survey also asked the public health nurses if there were other employment opportunities for them nearby and had they looked for other employment opportunities.

Table 13

Public Health Nurses' Intent to Stay in their Present Position

Intent to Stay	*n*	*P*
< 1 year	13	11
1 – 2 years	20	17
2 – 4 years	23	20
≥ 5 years	60	52

Even though 7% did not respond, more than half (52%) of the public health nurses said they would stay in their job for 5 or more years. A similar percentage (51%) indicated they had not looked for other employment. However, of the 49% who said "yes" to looking for other employment 68% had only looked for nursing employment, while 11% had only looked for non-nursing employment, and 21% had looked for both nursing and non-nursing employment. The majority of the respondents did not feel there were attractive employment

opportunities outside of nursing (73%) or in nursing (75%) in or nearby their communities.

The younger cohort demonstrated a different profile for tenure. Forty-six percent of the younger cohort indicated they planned to stay for 5 years or more while 11% indicated they would work another 2 to 4 years. However, 43% of the younger cohort reported they planned to leave in 2 years or less.

Benefits currently received. Benefits and rewards (Table 14) are often thought of as retention strategies (Stratton et al., 1995), therefore these public health nurses were asked, "what benefits do you receive" and "how important are the benefits". The top three benefits rated for importance were their "vacation time" (96%) followed by "inservice" (95%) and then the "retirement" benefits the job would provide (95%). Stratton et al. also found vacation rated as most important in benefits. Some of the public health nurses commented that inservices had been cancelled. Benefits that were least important were "day care" (38%), "cell/mobile phone" (60%) and "isolation allowance" (61%). Although the non-response rate for the importance aspect of each benefit varied from 11% to 15%, most being at the lower value there were still 105 to 111 responses for each item.

The younger cohort valued more benefits. The most important were "health insurance" (96%), "vacation" (96%), "sick/maternity leave" (93%), "health unit car" (93%), "retirement benefits" (92%), and "inservices" (92%). The least important was "cell phone" (69%) and "daycare" (73%).

Table 14

Benefits Received and Perceived Importance of Benefits for Public Health Nurses

Benefits	Yes *P*	No *P*	Neutral *P*	Important *P*
Vacation	94	6	1	96
Inservice	95	5	3	95
Retirement	85	15	3	95
Health Insurance	88	12	3	92
Sick/maternity	92	8	6	91
Tuition	46	54	10	85
Health unit vehicle	47	53	13	81
Telephone conference with peers	84	16	15	77
Isolation Allowance	16	84	19	61
Cell/mobile phone	46	54	30	60
Day care child/elder	1	99	20	38

Two benefits were examined more closely, one because of contract bargaining and one because of its assumed effect on professional isolation. The availability of a health unit vehicle was rated in seventh place with 81% of the respondent indicating it was important to them. At the time of sampling this was considered an important issue in the upcoming contract bargaining. Yet, 53% (n = 62) of the public health nurses reported not having a health unit vehicle for service delivery while 47% (n = 55) reported having or sharing a vehicle. Six percent did not respond to this part of the question. The rural group rated the importance of a vehicle M = 4.41 while the non-rural group indicated the importance M = 4.26 but this was not a significant difference at an alpha level of .01. Eleven percent did not indicate the importance of a health unit vehicle to them.

Professional isolation has been identified as an issue in rural nursing (Davis & Droes, 1993, Hegney, 1996b). Collectively, "telephone conference with peers" was indicated by 84% (n = 101), as a benefit they received. Seventy-seven percent (n = 84) perceived this benefit as important to very important to them. Fifteen nurses (12%) did not rate the importance of this benefit. The rural public health nurses (M = 4.31) rated telephone conferencing as more important than the non-rural group of nurses (M = 3.89). The importance of telephone conferences with peers compared between rural and non-rural groups revealed a significant difference (t = 2.26, df = 107, p < .03). The researcher decided to report this result even though it is outside of the alpha level of .01 initially set in the Methods chapter because of the calculated Cohen's d = .43. More research is needed to determine whether this result can be repeated. Another notable difference regarding benefits is shown by 16% of the respondents indicating they received isolation allowance yet 61% indicated it is important, no speculation can be made regarding this.

Comments collected throughout the questionnaire point to a lack of satisfaction with educational opportunities. Some of these statements included:

- Really miss easy access to educational opportunities with travel, distance and cost being the biggest deterrents

- Rural nurses have even more challenges than urban nurses to stay current

- Frustrated at lack of agency encouragement for advance training other than inservices or 'on the job'. Our allowance is capped at $400 per year. This doesn't even pay for a return flight to most centres in British Columbia! Not to mention other related costs.

Likewise, public health nurses gave suggestions on what worked or might work.

- I think having occasional major educational events shared in smaller communities not only financially is a bonus for these nurses but also will reach nurses that otherwise would not attend the education opportunities

- Great to see St. Paul's and UBC doing 'rounds' over the internet with teleconferencing very easy to access

Summary

The retention-related characteristics examined how the sample of public health nurses felt about their jobs. Overall, more than half of the public health nurses admitted to feeling geographically isolated, this was especially true for younger public health nurses. About a quarter of the respondents had accepted their present position because their spouses or partners were employed in the community. Only half of the public health nurses were planning to stay for another five years in their present job. Approximately one quarter of the younger cohort was planning to leave their jobs in the next two years. Overall, the respondents identified the most valued benefits of their present employment were vacation time, inservice and retirement benefits. The younger nurses also valued health insurance, sick and maternity benefits and having a health unit vehicle.

Section II

The results presented in Section II identify the job components and community variables that public health nurses perceive as satisfying and important. It also addresses the general and specific differences between rural and non-rural public health nurses in their satisfaction with job and community.

This section contributes to understanding the effect of this information on retention.

Job Component Satisfaction and Importance

The statements are grouped into the subscales for each work component to determine job satisfaction and importance. As mentioned in the Methods chapter, work satisfaction was addressed by four approaches. First, descriptive analysis was used to examine each statement. Second, the alpha coefficient was calculated for each subscale. Third, the mean score of each work component was done to enable ranking of the work components. Fourth, subscales of each work component were compared for difference between rural and non-rural public health nurses. The 38 questions used to indicate the job components and hence job satisfaction were the most frequently answered questions by the respondents with non-response rates less than 5%, the most common being 2%.

The work components are professional status, salary, autonomy, task requirements, organizational climate, interaction, and benefits and rewards. Each work component (Table 15 to 21) is introduced with its operational definition. As described in the Methods chapter, the specific statements for the subscales were determined by reviewing the research of Dunkin et al. (1992) and Stamps and Piedmonte (1986), along with having them reviewed by Stratton (personal communication, April 20, 1999). Public health nurses indicated their responses to specific statements from 1 (strongly disagree) to 5 (strongly agree). Some statements are negatively stated, therefore bold print has been used to

indicate a common direction of the responses. The neutral responses are not reported.

The work component, professional status, described the nurses' perception of the importance of nursing to themselves and the community (Dunkin, et al 1992). The three statements used to explore this component are displayed in Table 15.

Table 15

Level of Agreement with Professional Status Items

Statement	Agree *P*	Disagree *P*
I have no doubt in my mind that what I do on my job is really important.	**90**	4
I am proud to talk to other people about what I do on my job.	**89**	4
If I had the decision to make all over again I would still go into nursing and PHN.	**62**	25

Although public health nurses agreed their job was important and were proud to explain to people what they did in their job only 62% would go into nursing and public health again. This was a similar value to what was found in an American sample of nurses (59.1%) and physicians (59.2%) who responded to the same question (Stamps & Cruz, 1994).

Comments describing the perceived lack of valuing were:

> • I am discouraged by the devaluing of public health nursing – by physicians, acute care nurses (we still seem to be in the medical model where our worth is measured by degrees of separation from the physician); the public does not understand our role until they have cause to interact with us; we are devalued by our administration in that vacation is not back filled; we are devalued by our union that sacrificed us in the last contract for the "greater good" [and] the classification tool was biased in favour of acute care settings.

- I feel strongly that community nurses have no voice in health care – acute care is the focus, yet "prevention" is what saves our government money.

The component, salary, was the perceived adequacy of amount paid for work done (Dunkin, et al. 1992). The four statements used to examine this component are displayed in Table 16.

Table 16

Level of Agreement with Salary Items

Statement	Agree *P*	Disagree *P*
Based on feedback from PHN in other health units, the pay at this health unit is fair.	38	**33**
Pay scales for PHN personnel need to be upgraded.	**94**	1
Considering what is expected of PHN personnel at this health unit, the pay we receive is reasonable.	14	**79**
My earning potential in this health unit is reasonable.	17	**55**

The mixed agreement by the respondents on "Based on feedback from PHN in other health units, the pay at this health unit is fair" could be due to the inappropriateness of the wording in this statement for public health nurses because they have a provincial collective agreement so that all public health nurses within the province have the same pay scale. Some public health nurses wrote beside this question "contract". The provincial collective agreement could also be the explanation for 79% of the public health nurses indicating their pay is reasonable. The majority (94%) of public health nurses agreed that pay scales needed to be improved.

Comments regarding salary were:

- It's interesting that my husband and I make the same amount of money. I spent 5 years at University and [have] worked full time for almost 20 years. He has 2 years of University and has worked full time for 10 years.

- Would be nice to get paid on line with other people with 4 year degrees.

The component, autonomy, examined perceptions of the amount of decision making, independence, and control nurses have over their job (Dunkin et al. 1992). Seven statements in Table 17 were used to examine this.

Table 17

Level of Agreement with Autonomy Items

Statement	Agree *P*	Disagree *P*
I have little control over my work.	15	**67**
A great deal of independence is permitted if not required of me.	**88**	7
I am sometimes required to do things on my job that are against my better professional nursing judgement.	12	**78**
I have too much responsibility and not enough authority.	22	**47**
I am sometimes given more responsibility in decision making that I am prepared to handle.	24	**62**
I have the support of my supervisor to make important decisions in my work.	**77**	12
I have sufficient input into implementing programs for the clients/family/community.	**59**	25

Most of the respondents (88%) felt they had a great deal of independence and 77% felt supported in their decision making by their supervisor.

The nurses' comments reflected opposing views on this job component, some identified:

- Job flexibility, I am able to prioritize my own caseload and function independently,

while others described:

• Not having the control over dispensing the public health programs.

Task requirements described the tasks that were regularly done by the nurse as part of the job (Dunkin, et al. 1992). The five statements in Table 18 were used to investigate this component.

Table 18

Level of Agreement with Task Requirements Items

Statement	Agree P	Disagree *P*
I have plenty of time to discuss PHN concerns with my colleagues.	**50**	40
In this health unit PHN are expected to perform non-nursing tasks.	68	**20**
Too much paper work is required of PHN personnel in this health unit.	64	**14**
The types of activities required of me are reasonable.	**84**	8
I have sufficient time to accomplish my job responsibilities.	**34**	58

Although 68% felt they were expected to perform non-nursing tasks a majority (84%) felt the types of activities they were required to do were reasonable. Even though there appears to be a contradiction here from the respondents more examination will need to be done to identify the non-nursing tasks. It appears that there is not a consistent agreement in what are non-nursing tasks when such a high percentage feel the activities they perform are reasonable. It could be surmised that public health nurses accept some non-nursing tasks as part of their job.

Comments reflecting the public health nurses' thoughts about their job tasks were:

- Job has become very stressful – too much to do and not enough time to do it. Increase in computer use and not enough training on computer. More work to do and no money to hire more nurses.
- Too much paperwork to fill out for administration

- We seem to spend more time immunizing and less time given to community nursing.

The component, organization climate, explored the character of the work environment affected by management, leadership styles and program policies (Dunkin et al. 1992). The six statements used to examine this component are displayed in Table 19.

Table 19

Level of Agreement with Organizational Climate Items

Statement	Agree *P*	Disagree *P*
PHN-client ratios in this health unit are conducive to implement client/family/ community services.	**37**	49
The PHN administrators or Seniors generally consult with PHN staff on daily problems and procedures.	**42**	43
PHN staff have sufficient control of the total number of hours worked.	**58**	29
A great gap exists between administration in this health unit and the daily problems of PHN service.	41	**41**
PHN staff have sufficient control in scheduling their own work hours in this health unit.	**76**	16
I have all the voice in planning and procedures that I want.	**39**	45

The responses were mixed to most of these statements. The statement "A great gap exists between administration...and the daily problems of PHN service" was evenly split on agreement and disagreement. Interestingly, Remus et al. (2000) reported a larger difference for Saskatchewan community nurses, 27% agreed and 73% disagreed with this statement. This could be due to the

mix included in her sample of community nurses. This sample of public health nurses agreed with scheduling of their own work hours (76%) and having sufficient control over number of hours worked (58%). However, the comments revealed a stronger view on health care changes that affect public health nursing:

> • With regionalization community health /prevention is not seen as important as acute care/hospital beds. It would be better to have the strength of a provincial system that we had before. Also, with regionalization we PHNs are left hanging without a supervisor who is familiar with PHN issues.
>
> • Really feel a lack of support from upper management for work done by front line nurses – really need to involve front line workers in initiating, evaluating and changing programs.
>
> • Devolving from the government has changed the environment at the Health Unit. Not enough support staff to sustain a health infrastructure. Management and staff all seem to be overworked.
>
> • Health care restructuring has impacted on job satisfaction [due to] health authorities, new employees, frequent turnover of CEO, public health nursing managers not facilitating our role in the community, staff members off sick with no replacement has worn full time staff members to the bone.

The work component of interaction examined cooperation, support and respect from peers, coworkers, and individuals in supervisory roles (Dunkin, et al. 1992). The six statements in Table 20 were used to examine interaction.

Table 20

Level of Agreements with Interaction Items

Statement	Agree *P*	Disagree *P*
My immediate co-workers are competent.	**90**	2
The PHN personnel in this health unit are not as friendly or supportive as I would like	16	**77**
A good deal of networking is present between various levels of PHN personnel in this health unit.	**66**	19
New PHN are not quickly made to feel at home in this health unit.	12	**73**
The PHN personnel in this health unit do not hesitate to take the time to consult with me or support me when things get in a rush.	**79**	12
I wish the physicians here would show more respect for the knowledge/skill of the PHN staff.	64	**14**

The majority (90%) agreed that their co-workers were competent. The respondents (79%) also felt that public health nursing personnel would take the time to consult or support them. The public health nurses (77%) felt that their health unit was friendly and new staff were welcomed. Remus et al. (2000) found community nurses in general were more likely to agree with this statement than institutional nurses. Comments presented both positive and negative perceptions of peers, coworkers and supervisors:

- I feel like I'm part of a team, respected, I feel I have time to do a good job, I have time to study, I have a lot of responsibility but I feel supported, I can ask questions at any level of public health nursing personnel.

- My co-workers are great

- Lack of support and respect from co-workers plus internal strife making the office an unhappy place to work.

Benefits and rewards included job related benefits that are tangible or intangible, and that recognize the nurses' achievements (Dunkin, et al. 1992). Table 21 contains the six statements used to examine this component.

Table 21

Level of Agreement with Benefits and Rewards Items

Statement	Agree *P*	Disagree *P*
This health unit offers opportunities for advancement/promotion.	20	**50**
PHNs in this health unit are encouraged to participate in continuing education.	**71**	18
I am frequently asked to work overtime.	11	**81**
This health unit financially rewards advanced training/education.	13	**67**
I work weekends.	18	**68**
I do not receive some benefits that are important to me.	41	**42**

The small percentage that agreed to opportunities for advancement/promotion is not surprising since advancement would only be available at the larger offices that have senior nurse positions. The respondents (71%) felt encouraged to participate in continuing education. Most of these statements could be answered yes or no. This is reflected by the high or low percentages who agreed or disagreed. Most public health nurses do not work overtime, the contract allows for "flex time". Therefore any extra hours they work they take back in "time off". Most public health nurses work Monday to Friday, some may schedule themselves to work a weekend to teach prenatal classes, have a clinic or hold a health fair. Others may work weekends if their health unit has an "early maternity discharge" program. The notable difference is the similar

split on "do not receive some benefits". No speculation can be made on what benefits they would like to receive.

Scale development job satisfaction. Each work component subscale was examined for internal consistency using the alpha coefficient (See Table 22). The higher alpha value indicates the scale was measuring the job component in question (Polit & Hungler, 1999). A Cronbach's alpha of >.70 to indicate satisfactory internal consistency was suggested by a Co-Principal Investigator with the National Survey: Nursing Practice in Rural and Remote Canada (N. Stewart, personal communication June 3, 2001). This was not achieved for every subscale. The overall job satisfaction scale was the sum of each work component subscale plus the score from the individual question "Overall, I am very satisfied with my job". The alpha coefficient for the overall scale indicated a strong operational definition for job satisfaction (.830). Likewise, not all the subscales used by Dunkin et al. (1992) tested over .70, but the overall job satisfaction scale had an alpha of .876. The score from the individual question on overall job satisfaction in Table 23 and 24 is not used but is presented for interest. The assumption is made that the score from the scale will give a more stable measure of overall job satisfaction because not all components that make up a job are equally liked.

Table 22

Alpha Coefficients for Satisfaction per Work Component

Component	Dunkin et al. 1992	Present research
Task requirement	.595	.619
Salary	.859	.759
Benefits and Rewards	.514	.429
Autonomy	.666	.641
Professional status	.350	.670
Interaction	.652	.652
Organizational climate	.730	.584
Overall job satisfaction	.876	.830

Ranking of job components. The mean score of each set of statements was used to give a satisfaction score for each work component, displayed in Table 23. The highest satisfaction rating was 5 and the lowest satisfaction rate was 1. Overall, the most satisfying work component for these public health nurses was professional status, rated 4.10. This was followed by the work components, interaction (3.66) and autonomy (3.65). These public health nurses were least satisfied with the work component, salary, rated 2.17 this was also was true for the younger cohort. These results reflected the top three satisfiers, however in a different order as identified by Dunkin et al. (1992) which were professional status, autonomy, and interactions. The least satisfying component identified by Dunkin's et al. was salary.

Some research found as the nurses' age increased so did their job satisfaction (Hegney, et al. 1997; Irvine & Evans, 1995). The results of this research did not support a correlation between age and job satisfaction ($r = .041$ $p > .05$). Age was not correlated to any of the separate job components. However some correlations were noted between the specific job components.

The public health nurses' satisfaction with autonomy had medium to large effect sizes (Cohen, 1992) when correlated to benefits and rewards (r = .337 p = .01), interaction (r = .537 p = .01), organization climate (r = .663 p = .01), professional status (r = .455, p = .01), and task requirements (r = .401 p = .01). A medium effect size (Cohen) was observed for a relation between organizational climate and interaction (r = .400 p = .01), professional status (r = .423 p = .01) and task requirements (r = .448 p = .01).

Table 23

Satisfaction Scores of Public Health Nurses per Work Component

	All			Rural			Non-rural		
Component	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*	*n*
Professional Status	4.10	.76	122	4.19	.71	67	3.99	.82	55
Interactions	3.66	.61	120	3.68	.50	65	3.64	.71	55
Autonomy	3.65	.54	120	3.74	.43	67	3.54	.64	53
Benefits and Rewards	3.21	.56	117	3.26	.58	66	3.15	.54	51
Organizational Climate	3.09	.66	119	3.17	.56	64	2.99	.75	55
Task Requirements	2.84	.66	122	2.81	.63	67	2.87	.70	55
Salary	2.17	.74	120	2.21	.74	66	2.12	.74	54
Question Overall Job Satisfaction	3.80	.95	122	3.93	.88	67	3.64	1.02	55
Overall Job Satisfaction scale	3.33	.47	109	3.39	.40	60	3.25	.53	49

The younger cohort (M = 3.32) and the total group (M = 3.33) had a similar score for the overall job satisfaction scale. The score for the individual question on "overall job satisfaction" was higher than the score from the scale. The public health nurses indicated more satisfaction with some work components (See Table 23). However when asked how satisfied they were with their job the public

health nurses reported the general question more favorably. The reason for this is not known.

In Table 24 the same technique was used to give an importance score for each work component. Therefore the importance of each work component was rated 1 (least important) to 5 (most important). In general, when the public health nurses rated the importance of their work components, they valued professional status the highest at 4.38. The next most important was interaction (4.34) followed by salary (4.33). The least important work component was benefits and rewards. This differed from the results found by Dunkin et al. (1992). The American nurses rated professional status and interaction equally in first place, then salary and autonomy. The American nurses also had two components tied for least importance they were task requirements and benefits and rewards.

Table 24

Importance Scores of Public Health Nurses per Work Component

	All			Rural			Non-rural		
Component	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*	*n*
Professional status	4.38	.59	115	4.37	.58	66	4.38	.61	49
Interactions	4.34	.56	115	4.39	.41	62	4.29	.70	53
Salary	4.33	.64	115	4.34	.62	65	4.32	.68	50
Autonomy	4.21	.50	113	4.24	.39	64	4.18	.61	49
Organizational climate	4.13	.61	110	4.14	.47	60	4.11	.75	50
Task Requirements	4.09	.56	115	4.11	.47	62	4.07	.65	53
Benefits and Rewards	3.87	.68	107	3.93	.62	61	3.79	.75	46
Question Overall Job Satisfaction	4.42	.78	118	4.44	.68	66	4.38	.89	52
Overall Job Satisfaction Scale	4.24	.49	90	4.28	.43	51	4.19	.58	39

Differences between rural and non-rural public health nurses. The rural public health nurses rated the top three work components as professional status (4.19), autonomy (3.74), and interactions (3.68). The non-rural public health nurses had the same top three in a different order, professional status (3.99), interactions (3.64) and autonomy (3.54). Rural public health nurses rated their overall job satisfaction score 3.39 while the non-rural public health nurses rated their overall job satisfaction 3.25. Although, previous research demonstrated that public health nurses were more satisfied with their jobs than other nurses (Dunkin, Stratton et al. 1994; Juhl et al. 1993), the difference in job satisfaction between rural and non–rural public health nurses had not been explored. With an alpha level of .05, the summated scores for each work component subscale and the overall job satisfaction scale were used to compare differences between rural and non-rural public health nurses. There was no statistical significance between these two groups with their satisfaction per work components or overall job satisfaction.

Summary

Overall, the public health nurses were most satisfied with their professional status, professional interaction, and autonomy. In contrast, for importance, public health nurses rated the job components: professional status, professional interaction and salary as most important to them. There was no significant difference in satisfaction levels of job components between rural and non-rural public health nurses. Two-thirds (61%) of these public health nurses would still choose public health nursing as a profession. This is a similar

response as an American sample of nurses and physicians who said they would choose the same profession again (Stamps & Cruz, 1994).

Community Satisfaction

Community satisfaction was evaluated similarly to the method used to examine job satisfaction. First, frequency endorsement was done to examine each community item. This was done to look at what public health nurses perceived as satisfying and important. The mean scores for each community item were also done. Second, the alpha coefficients were done to examine the internal consistency of several combinations of scales. This was used along with the descriptive analysis to determine which scale would be used for community satisfaction. Third, each community aspect was compared for group differences between rural and non-rural public health nurses. Select correlations were done to determine relations. There was a medium correlation (Cohen, 1992) when examining the relation between age and community satisfaction (r = .318 p = .01). The correlation for number of years in the community and community satisfaction (r = .269 p = .01) was small (Cohen).

The frequencies of responses helped to determine what community aspects to use for the community satisfaction scale (See Table 25). Approximately two thirds of the respondents were satisfied with the community acceptance of their spouse/partner (79%), the friendliness of their community (71%), safety (68%), their friends (65%), and size of their community (66%).

Table 25

Percentage of Public Health Nurses Indicating Level of Satisfaction with Community Items

	Statement	Satisfied *P*	Neutral *P*	Dissatisfied *P*
a	Level of Anonymity	48	27	26
b	Friendly	71	25	4
c	Trusting	59	33	8
d	Social/recreational opportunities	55	29	16
e	Friends	65	24	11
f	Place of worship	54	41	5
g	Quality of schools (K-12)	48	34	19
h	Safety	68	22	10
i	Overall environment for children	61	30	10
j	Community acceptance of spouse/partner	79	17	4
k	Consulted on work issues outside of work	42	41	17
l	Size of community	66	19	15
m	Distance away from major centre	25	24	51
n	Ability to stay current in your practice	48	17	35
o	Local government	26	45	29
p	Overall community satisfaction	63	31	5

Even though, the respondents commented on the difficulty of scoring for importance and some respondents omitted this part of the questionnaire, the importance frequencies displayed in Table 26 were useful in deciding what items should be tested in the scale. The highest frequencies for importance were: safety (96%), their ability to stay current in their practice (96%), the overall environment for children (94%), their friends (93%), a friendly community (91%), social/recreational opportunities (91%), a trusting community (89%), the quality of the schools (86%), and community acceptance of spouse/partner (83%).

Table 26

Percentage of Public Health Nurses Indicating Level of Importance with Community Items

	Statement	Important *P*	Neutral *P*	Unimportant *P*
a	Level of Anonymity	50	36	14
b	Friendly	91	8	1
c	Trusting	89	11	0
d	Social/recreational opportunities	91	8	1
e	friends	93	8	0
f	Place of worship	49	22	29
g	Quality of schools (K-12)	86	8	6
h	safety	96	4	0
i	Overall environment for children	94	4	3
j	Community acceptance of spouse/partner	83	12	6
k	Consulted on work issues outside of work	49	42	9
l	Size of community	72	24	4
m	Distance away form major centre	72	26	3
n	Ability to stay current in your practice	96	4	0
o	Local government	63	36	2
p	Overall community satisfaction	88	12	0

The mean of each score displayed in Table 28 was used to determine a satisfaction score for each aspect of the community. The respondents were asked to rate 15 items specific to their community satisfaction. The rating was 1 (least satisfying) to 5 (most satisfying). Overall, the top four items of community satisfaction were "community acceptance of the partner" (4.10), "friendly community" (3.88), and "friends" (3.83), and "place of worship" (3.72). The three least satisfying community factors were their "ability to stay current in their practice" (3.15), "local government" (2.92), and "distance community is away from major centre" (2.62). For the younger cohort the top four community aspects were "community's acceptance of their partner" (4.00), "place to worship"

(3.74), "friendly community" (3.62), with "friends" and "safety" at 3.55. The three aspects of the community the younger cohort were least satisfied with were "ability to stay current in their practice" (2.72), "local government" (2.66), and "distance community is away from major centre" (1.90). In general public health nurses rated community satisfaction $M = 3.50$ while the younger cohort rated community satisfaction $M = 3.16$.

The importance of each community item was rated 1 (least important) to 5 (most important) and the mean score calculated. When these public health nurses rated what they perceived as most important to them in their communities they indicated "safety" (4.66), the "ability to stay current" (4.60) and their "friends" (4.50). Many of the items identified by the public health nurses as satisfying and important were the same as identified for rural physicians by Kazanjian, et al. (1991, 1998). The younger cohort considered some different community aspects as important. These were "ability to stay current" (4.83), "safety" (4.67), and "overall environment for children" (4.59) and "social and recreational opportunities" (4.59). The least important to the younger cohort were "being asked work related questions outside of work" (3.86), "local government" (3.83) and "place to worship" (3.14).

Scale development for community satisfaction. Several aspects of the community were combined to test different scales (See Table 27). The 15-item subscale for community satisfaction gave a satisfactory Chronbach's alpha (.859) for the scale. However, using the respondents' preferences for community aspects by examining their perceived satisfaction and importance, other

combinations of items were tested to determine if a scale with fewer items was also adequate.

One combination for a subscale examined items from Filkins' et al. (2000) research which were "friendly", "friends", "trusting", "social/recreational opportunities", "place of worship", "quality of schools", "safety", "local government", and from Allen & Filkins (2000) "size of community". Of these nine community aspects the present sample of public health nurses indicated that 49% felt "place to worship" was important and only 63% thought "local government" was important so these items were removed. A community satisfaction subscale of 7 items (see Table 27) gave a Cronbach's alpha = .793 and when "overall community satisfaction" was added the Cronbach's alpha for the 8-item scale was .840. The researcher decided to consider the 7-item scale the basic community satisfaction scale.

Table 27

Alpha Coefficients per Community Satisfaction Scales

Component	# of items	alpha
Community	15[a]	.837
Overall Community	16[b]	.859
Community	7[c]	.793
Overall Community	8	.840
Community	11[d]	.811
Overall community	12	.844

Note. The letters refer to the community items listed in Table 25 and 26 that have been used in the scale. [a]items a,b,c,d,e,f,g,h,I,j,k,l,m,n,o.
The overall community satisfaction item is added to composite scales, [b]overall community has the previous items plus "p".
[c]items b,c,d,e,g,h,l.
[d]items a,b,c,d,e,g,h,k,l,m,n.

Four other items were added specific to public health nursing in rural communities because of the researcher's personal experience. These were satisfaction with "level of anonymity", "consulted outside of work hours", "ability to stay current" and "distance to major centre". This last item can affect the public health nurses' "ability to stay current". This 11-item subscale had a Cronbach's alpha of .811. The overall community satisfaction scale (12-item) gave a Cronbach's alpha of .844. All of these combinations gave a strong operational definition of community satisfaction. Consistent with the method used for an overall job satisfaction score, the overall community satisfaction (12-item) uses the 11-item subscale plus the single question of "overall community satisfaction". Again the assumption was made that the score of multiple aspects of the community would give a more stable measure of community satisfaction. The score for the individual question on overall community satisfaction has been presented in Table 28 for interest.

Table 28

Satisfaction Measurements for Community Items for Public Health Nurses

	All			Rural			Non-rural		
Item	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*	*n*
Community's acceptance of spouse/partner	4.11	.86	104	4.24	.86	55	3.96	.84	49
> Friendly[a]	**3.88**	**.78**	**121**	**3.95**	**.74**	**65**	**3.79**	**.83**	**56**
> Friends	**3.82**	**1.02**	**121**	**3.85**	**.99**	**65**	**3.79**	**1.07**	**56**
Place of worship	3.72	1.02	114	3.73	1.03	62	3.71	1.02	52
> Trusting	**3.68**	**.89**	**121**	**3.80**	**.81**	**65**	**3.54**	**.95**	**56**
> Size of community	**3.64**	**1.05**	**112**	**3.52**	**1.06**	**58**	**3.78**	**1.02**	**54**
> Social/recreation opportunities	**3.62**	**1.16**	**121**	**3.45**	**1.21**	**65**	**3.82**	**1.06**	**56**
> Safety	**3.61**	**.82**	**115**	**3.73**	**.74**	**59**	**3.48**	**.89**	**56**
Overall environment for children	3.60	.83	115	3.66	.76	59	3.54	.89	56
> Quality of schools (K-12)	**3.35**	**1.05**	**117**	**3.27**	**1.13**	**64**	**3.45**	**.95**	**53**
> Being asked work related questions outside of work	**3.25**	**.98**	**112**	**3.00**	**1.01**	**58**	**3.52**	**.89**	**54**
> Level of Anonymity	**3.22**	**1.15**	**120**	**3.17**	**1.28**	**66**	**3.28**	**.98**	**54**
> Your ability to stay current in your practice	**3.14**	**1.14**	**114**	**3.07**	**1.18**	**60**	**3.22**	**1.09**	**54**
Local government	2.91	.94	113	2.93	.93	59	2.89	.97	54
> Distance your community is away from a major centre	**2.61**	**1.21**	**113**	**2.58**	**1.21**	**59**	**2.65**	**1.23**	**54**
> Question Overall community satisfaction	**3.73**	**.78**	**112**	**3.81**	**.71**	**59**	**3.64**	**.86**	**53**
> Overall community satisfaction scale (12) score	**3.50**	**.60**	**103**	**3.46**	**.56**	**56**	**3.56**	**.64**	**47**

Note. [a]bold print indicates 12-item scale and score

Differences between rural and non-rural public health nurses. One characteristic that has been identified as unique to rural nursing is lack of anonymity (Bigbee, 1993; Hegney, 1996b, Leipert, 1999). Therefore, before examining aspects of the community, public health nurses were asked to indicate their level of anonymity from low (1) to high (5). Sixty-seven percent of the public health nurses indicated their level of anonymity as low, 18% were neutral and 15% felt they had high anonymity. It was expected that rural nurses would have lower anonymity in their community (See Table 29). The majority (74%) of the rural group indicated low anonymity while the non-rural group 57% reported low anonymity. The independent *t*-test supported this view ($t = -2.47$, $df = 118$, $p < .02$). The Cohen's *d* effect size has been calculated to be 0.44. It is a small effect, lending support that this result has some practical significance.

Table 29

Public Health Nurses' Perceived Level of Anonymity

	Low		Neutral		High	
	n	*P*	*n*	*P*	*n*	*P*
Rural	49	74	9	14	8	12
Non-rural	31	57	13	24	10	19

All 15 items for community satisfaction were included for comparison between non-rural and rural using independent *t*-tests. All testing for the community aspects were tested with an alpha level of .01 and all effects sizes calculated, there was one exception which is stated here. Rural and non-rural public health nurses differed in their satisfaction with being asked work related questions outside of work (See Table 30). For all public health nurses, 17% were dissatisfied with this item. When the rural and non-rural groups were examined

separately, 27% of the rural public health nurses were dissatisfied with this item compared to 5% of the non-rural public health nurses who were dissatisfied with the same item.

Table 30

Satisfaction with being Consulted Outside of Work

	Unsatisfied		Neutral		Satisfied	
	n	*P*	*n*	*P*	*n*	*P*
Rural	16	27	24	41	19	32
Non-rural	3	5	22	42	28	53

Consequently, the item that significantly differed on satisfaction between rural and non-rural public health nurses was "being asked work related questions outside of work" ($t = -3.14$, $df = 110$, $p < .002$) with a calculated Cohen's d effect size of .57. Hegney (1996b), Hegney et al. (1997) and Leipert (1999) reported rural nurses were consulted outside of work. The present research identified that rural public health nurses were less satisfied with this aspect of rural living.

The sample did not support a difference between rural and non-rural on their satisfaction with level of anonymity (See Table 31). For the respondents in this study, being easily recognized in the community is not the issue, but being asked work-related questions, which is a by-product of lack of anonymity, is an issue. One respondent summed it up with: "lots of people know me, I like it, or rather [I] am not bothered by it". The results suggest the term anonymity may not be adequate to explore how anonymity is perceived by public health nurses living in rural places. There may be aspects of lack of anonymity that are satisfying or not satisfying to public health nurses. There was no significant difference with overall community satisfaction between groups.

Table 31

Satisfaction with Perceived Level of Anonymity

	Unsatisfied		Neutral		Satisfied	
	n	*P*	*n*	*P*	*n*	*P*
Rural	21	31	15	22	31	46
Non-rural	10	2	17	32	26	49

Two percent of non-rural were unsatisfied with their level of anonymity as opposed to 31% of the rural public health nurses who were unsatisfied with their level of anonymity. This had a negligible (Cohen, 1992) effect (.12) and it was not significant with a less conservative alpha. However the difference here supports that this should be explored in detail. Further discussion is found in Chapter 5.

When ranking rural and non-rural, the rural group rated "community's acceptance of spouse/partner" (4.24), "friendly" community (3.95) and their "friends" (3.85) as the top three satisfiers. The non-rural group rated "community acceptance of partner" (3.96), the "social and recreation opportunities" (3.82) followed by "friendly" community (3.79) and "friends" (3.79) as their top three satisfiers. Although "social and recreation opportunities" is rated second for the non-rural group this item is rated eighth for the rural public health nurses. Descriptively, the younger cohort indicated lower satisfaction with "social and recreational opportunities" with a mean score of 3.37 placing it sixth in satisfaction scores.

Rural and non-rural appeared initially to differ on social and recreational opportunities (See Table 32). The rural public health nurses reported 23%

unsatisfied and 48% satisfied with their social and recreational opportunities while the non-rural group reported 7% unsatisfied and 64% satisfied. The researcher decided to draw attention to the results because (t = -2.01, df = 119, p < .047) and Cohen's d effect of .36 (small). This community aspect will need more exploration to verify whether this aspect of the community should be considered of practical significance.

Table 32

Satisfaction with Social and Recreational Opportunities

	Unsatisfied		Neutral		Satisfied	
	n	*P*	*n*	*P*	*n*	*P*
Rural	15	23	19	29	32	48
Non-rural	4	7	16	29	35	64

The "community acceptance of partner" and "partner's satisfaction with the community" was scrutinized (See Table 33) because physicians reported dissatisfaction with spouses limited or lack of career possibilities (Hamilton, et al. 1997; Kazanjian, et al. 1991). It was surmised that spousal dissatisfaction for whatever reason would be reflected in these two questions. Both rural and non-rural public health nurses reported equal dissatisfaction (4%) with the "community's acceptance of partner". Likewise both groups had high levels of satisfaction with this aspect of the community. There was no significant difference between these two groups at an alpha level of .01.

Table 33

Satisfaction Level with Communities Acceptance of Partner

	Unsatisfied		Neutral		Satisfied	
	n	*P*	*n*	*P*	*n*	*P*
Rural	2	4	6	11	48	86
Non-rural	2	4	12	24	35	71

The separate question spouses' or partners' satisfaction with the community indicated that the non-rural public health nurses rated their spouses' community satisfaction $M = 3.80$ while the rural group rated their spouses' community satisfaction $M = 3.77$. This difference was not significant at a .05 alpha level.

Summary

Descriptively the three community items that most satisfied all the public health nurses were the "community's acceptance of their partner", a "friendly" community, and their "friends". Social and recreational opportunities were also rated in the top three satisfiers for non-rural public health nurses but not for rural nurses or the younger cohort. The younger cohort was least satisfied with the distance their community was away from a major centre. The community aspects all public health nurses perceived as most important in their community were "safety", their "ability to stay current in their practice" and their "friends".

There were two areas of significant difference between rural and non-rural public health nurses in the community: anonymity, and consultation outside of work. Rural public health nurses had lower levels of anonymity however they

were not dissatisfied with the low level of anonymity. Rural public health nurses were less satisfied with being consulted outside of work hours.

The Influence of Job and Community Satisfaction on Retention

Job and community satisfaction did not support retention for this sample of public health nurses. This differed from Dunkin's et al. (1992) research finding of job satisfaction supporting retention. Likewise, the retention model (Dunkin, Stratton et al. 1995) supported the influence of community satisfaction on retention. Community satisfaction was rated higher than job satisfaction when compared within their respective groups. The public health nurses rated their overall job satisfaction as 3.33 for the collective group, 3.39 for the rural group and 3.25 for the non-rural group. The community satisfaction was 3.52 for the collective group, 3.48 for the rural group, and 3.57 for the non-rural group. This group of public health nurses seemed to be more satisfied with their communities than their jobs. However, when the younger cohort was examined on its own descriptively, the younger public health nurses rated overall job satisfaction (3.32) higher than community satisfaction (3.16).

A Pearson product-moment correlation was used to examine job satisfaction, community satisfaction and retention for a relationship. Job and community satisfaction had a medium effect size (Cohen, 1992) for correlation ($r = .477$ $p < .01$). There was not a correlation between job and community satisfaction with retention in this sample of public health nurses. Likewise, this sample did not support that job satisfaction influenced retention or that community satisfaction influenced retention.

Reasons for staying or leaving present employment. It is recognized that nurses leave their jobs more often because of personal reasons rather than professional reasons, such as relocating with a spouse (Dunkin, et al. 1992; Dunkin, Stratton, et al. 1994). Questions 63, 64 and 65 were open-ended questions allowing the public health nurses to elaborate on their answers. Most of the comments have addressed the variables from this survey for example, the job satisfaction components, overall job satisfaction, and community satisfaction.

Some issues became apparent that had not been addressed in the survey. These issues were: 1) financial considerations that were not associated with the variable, salary, and 2) loss of portability of seniority and benefits when moving to another public health nursing position outside of the nurses' own region (lost with the amalgamation of acute and community nurses' provincial contracts).

Some issues were given as a reason for staying and also as a reason for leaving employment. Retirement was mentioned by 16% of the respondents as a reason for staying or leaving, for example they were staying because it was "too close to retirement" to leave, or they would leave due to early retirement. This was not surprising when 17% of the respondents indicated they were 55 years and older. Spouses or partners were mentioned by 33% of the respondents as affecting retention either positively or negatively. Public health nurses reported they would stay in their job because their spouse was employed in the community or leave their job if their spouse relocated due to employment.

Question 63 asked "What are the main factors that are influencing you in *remaining* in your current position in this community?" Ninety four percent of the respondents commented on their reason for staying in their job.

Comments that reflected some aspects of the work component, benefits and rewards, were given for reasons for staying in their present position:

- Do not want to go back to shift work
- Too close to retirement to move
- Last 5 years before retirement are most important to get anything for pension
- Unable to transfer within province as previously with provincial government contract
- Present benefits

Common responses for staying in their present employment related to their opportunities were:

- real estate not selling, not prepared to move and have house sell for loss
- spouse's job is stable employment
- no other job available closer or in my home community

Yet, other responses were related to personal circumstances:

- financial debt
- family commitments, children finishing school
- love the community, great for raising children

Some commented on their job satisfaction:

- a very diverse and challenging position, I work alone and have numerous freedoms in defining my scope of practice ... am part of a very effective health care team

- after 14 years of acute care nursing, I have discovered that public health nursing is the perfect nursing role for me – I am interested in families, communities and working with people to identify and build on their strengths.

Question 64 asked "What factors might cause you to *leave* your current position within the next 5 years?". Ninety six percent of the respondents were quite clear about what would make them leave their job. Some respondents indicated both personal and professional reasons while others only mentioned personal reasons. Seventy two percent cited personal reasons while 66% cited professional reasons. Some of the professional issues were related to job satisfaction such as "interpersonal conflict and loss of job autonomy", "deteriorating nursing working conditions and wages", and "lack of advancement and lack of support /respect from coworkers". Some personal reasons for leaving a position were "children's educational needs", "partner is RCMP [member] moving is part of their job", and "the need for a larger community".

Professionalism, to seek learning opportunities, was indicated by public health nurses to influence their decision to leave their jobs within the next 5 years. Some comments to support this were:

- Need growth in my nursing career
- To further my education

Comments related to salary for reasons to leave their position were:

- Low wages
- If we don't get a raise I may seriously consider retirement at 55.

Typical responses from public health nurses for leaving their job reflected personal circumstances and opportunities. Some cited they would leave their job as a result of a serendipitous event. Comments were:

- Relocate closer to family, post secondary education
- Need a change, new opportunities for a job
- Partner unable to find work
- Win the lottery or gain an inheritance.

Other responses indicating job dissatisfaction were:

- Co-worker negativism, unsupporting attitudes, and lack of direction in terms of overall public health nursing program in goals, objectives and how to accomplish them
- Isolation and pressure of working solo much of the time
- Organization structure change under New Directions led to lack of support for public health nursing program
- Fed up with nursing getting closer to quitting every day
- Question management's competencies – enough so that I could easily leave tomorrow!

Only 49% responded to question 65, "Any comments you wish to make concerning your job, community, rural nursing in general or this study". Some of these responses have been used throughout the results to support the nurses' perceptions of job or community components. Other comments reflected the nurses' perceptions of what it means to work in a rural community, issues around staying current, and issues around job components. For example:

- I have worked in a larger centre for awhile and if you are looking to be specialized in a specific area this is great. Rural nursing is for those who like to keep current in everything but requires much more educational

support to do this as working rural does mean you are further removed from the ability to readily access education opportunities

• we are a health unit with the main office elsewhere. I probably would have answered questions quite differently on the rating scales if I was working in the larger office

• we have a very responsive community to health related issues which makes the work more enjoyable

• networking and connection with what others do is so valuable.

A number of nurses appreciated the opportunity to reflect on their public health nursing practice. Many comments described the difference between acute care nursing and public health nursing. Most of these comments were supportive to public health nursing for example "[a] completely different nursing culture than hospital [public health nursing is] supportive, respectful, feeling of being valued, no oppression".

Some of the respondents took the time to comment on the format of the questionnaire, especially the length of time to fill out questionnaire and the space provided to them for responding. Others expressed that "our office is not exactly rural" however the office met the Statistics Canada definition of rural.

Summary

This sample of public health nurses reported more satisfaction with their community than with their jobs. Although job and community satisfaction are significantly correlated with each other, they were not correlated to retention. In this research neither job satisfaction or community satisfaction supported retention. The written comments revealed that the same reasons that would keep public health nurses in their jobs for another five years were also given by

others for reasons to leave their jobs within the next five years. Spouses' jobs, relocation or retirement, family commitments, such as children's education, aging and sick parents, and benefits are some of the factors that can positively or negatively affect retention.

CHAPTER FIVE: DISCUSSION

This research provides a Canadian perspective of job and community satisfaction in the retention of public health nurses, with a direct examination of public health nurses who work and live in eight predominantly rural health regions of British Columbia. Some communities within these regions have populations over 10,000, and thus are considered non-rural (Statistics Canada, 2000). Hence, the researcher compared rural and non-rural public health nurses within these eight areas with respect to perceived job and community satisfaction.

This study explored two aspects of retention, in particular, job satisfaction and community satisfaction. The results showed even though public health nurses have job and community satisfaction these factors are not reflected in their intent to stay in their present position (retention). Other issues have surfaced that affect retention of public health nurses in various ways.

The results show job satisfaction plays a role in retention. Job satisfaction takes place in the community where the public health nurses work and live. Hence, community satisfaction "surrounds" job satisfaction (See Figure 2). Public health nurses have identified other reasons for "staying" or "leaving" their current position. These other reasons appeared to act as a filter to retention, regardless of their personal perceptions of job and community satisfaction. I have used the analogy of filter factors to mean promoting or limiting retention. Three groups of factors have been identified which filter the effect of job and community satisfaction on retention. These filter factors are grouped into

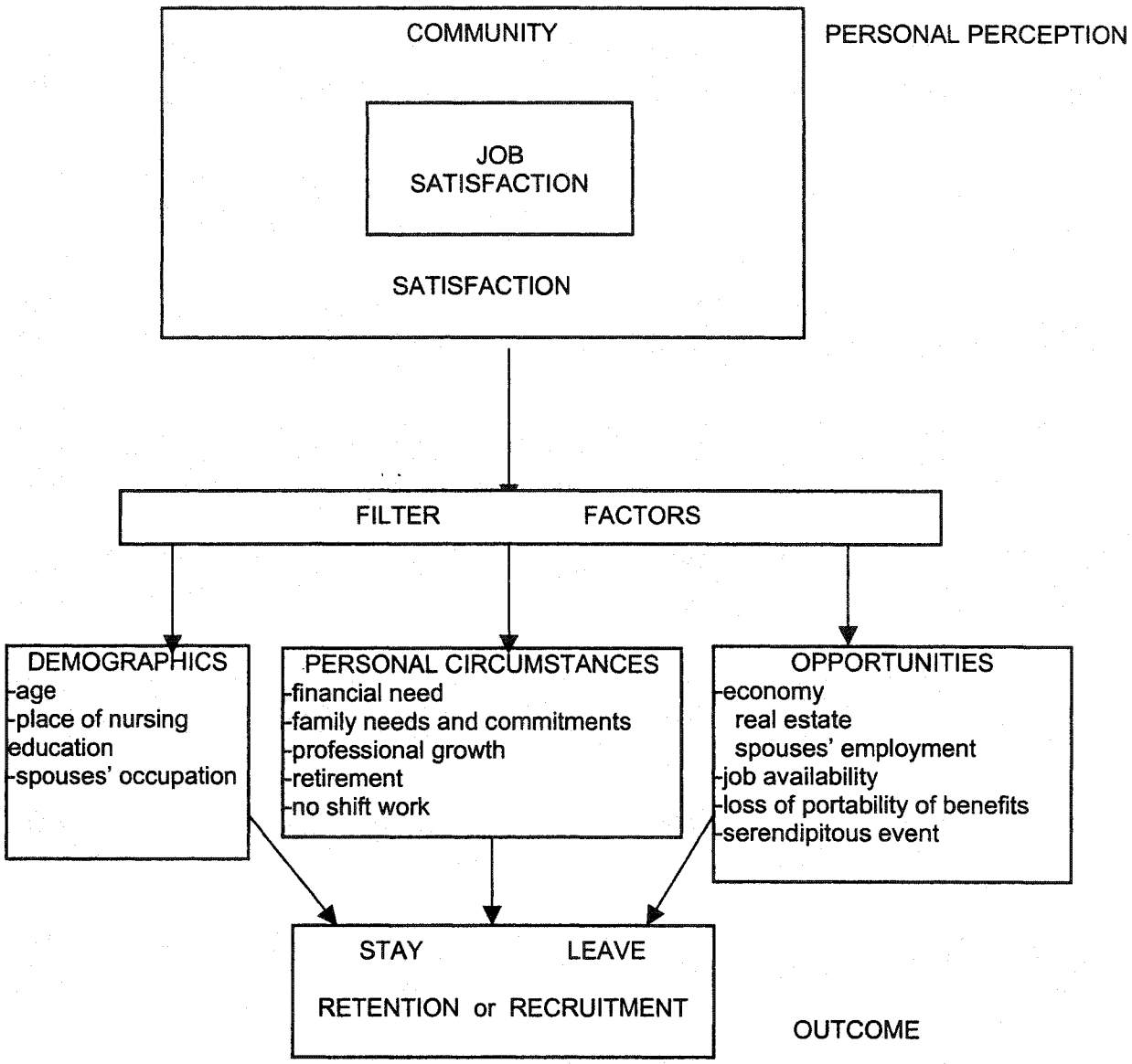


Figure 2. The effect of filter factors on job and community satisfaction in retention.

demographics, personal circumstances and opportunities. Consistent with this conceptualization, the research findings are discussed to address retention. Public health nurses' job satisfaction is discussed followed by their community satisfaction because it is the setting for their jobs and personal lives. The filter factors in the three groups are examined in the context of how they influence retention regardless of the public health nurses' perception of job and community satisfaction.

Job Satisfaction

There is no statistical difference in job satisfaction between rural and non-rural public health nurses. Public health nurses are moderately satisfied with their job although they appear more satisfied with some job components than others. This was suggested by their mean scores for the job components and the self reported comments. The consistent identification of three job components that public health nurses find most satisfying, professional status, interaction and autonomy are similar to the results found by Dunkin, et al. (1992). The components of professional interaction (Hegney, et al. 1997; Leipert, 1996; Tomich, 1993; Woodcox, et al. 1994) and autonomy (Hegney, et al; Stewart & Arklie, 1994; Woodcox, et al.) have been commonly identified in the research as satisfying to public health nurses. The public health nurses value three job components over the rest. These are professional interaction, professional status and salary. Professional status and interaction are important and public health nurses indicate satisfaction with these components, therefore these components meet their needs (Vroom, 1964).

Salary is identified as the least satisfying job component, but at the same time salary is highly valued as a job component. According to Vroom (1964) this difference leads to dissatisfaction. Salary has been a well-identified detractor (Dunkin, et al. 1992; Hegney, et al. 1997; Juhl, et al. 1993; Lucas, et al. 1988; Remus, et al. 2000; Woodcox, et al. 1994). The respondents identify dissatisfaction with salary as a reason to leave their jobs. Salary has many implications. If salary is competitive it can be used to recruit or retain public health nurses (RNABC, 2001a).

The public health nurses rated the organizational climate ($M = 3.09$) within which they work. The comments revealed concerns with this job component. The nurses claim they are undervalued for their role in health care supporting their claims by citing that their positions are not filled when on vacation or off sick. They perceived lack of support due to reorganization of health care by decentralizing services, and by non-public health nurses as immediate managers. Comments such as "who are the managers", "question competency of management", "management and public health nurses over worked" and "not enough time to do work" indicate dissatisfaction and concern with this aspect of their job. The dissatisfaction with "not enough time" has been previously documented by other researchers (Leipert, 1999; Reutter & Ford, 1996; Stewart & Arklie, 1994). One respondent identified that the strength of the old provincial system was the support it gave public health. Hegney et al. (1997) found restructuring of health services stressful for nurses. This continued feeling of lack of value and support can undermine the workforce, causing public health

nurses to leave their positions. This can be supported by statements from the respondents revealing they were considering early retirement because of dissatisfaction with organizational change or leaving their position because they were "fed-up" with poor management at the organizational level.

The public health nurses agreed autonomy is satisfying but it is not rated in the top three job components for importance, perhaps because autonomy is taken for granted as an aspect of public health nursing practice. The idea that autonomy is part of rural practice is held by most rural researchers (Bigbee, 1993; Davis & Droes, 1993; Hegney, 1996b). Yet, public health nurses inherently have autonomy in their practice whether they are rural or not (Leipert, 1996; Remus, et al. 2000; Reutter & Ford, 1996; Woodcox, et al, 1994). There may be aspects of autonomy that are missed by present research methods. Further support for this comes from physician studies; physicians have autonomy of practice yet Kazanjian et al. (1991) did not find a significant difference in autonomy between rural and urban physicians. Therefore the conceptualization of autonomy may not be sufficient for rural professionals. Logically there are few or no peers to consult with, public health nurses are responsible for implementing all public health nursing programs similar to rural hospital nurses saying "We're it" (MacLeod, 1999). Consequently, a more inclusive scale may need to be developed in order to distinguish what rural public health nurses mean by autonomy as opposed to what non-rural public health nurses mean by this term. Not all individuals see autonomy as positive. Hegney et al. (1997) reported that 7% of the nurses in her study described autonomy as negative because of

perceived lack of support. There may be aspects of autonomy that rural public health nurses will identify differently if more aspects of autonomy are explored.

Professional isolation has been cited throughout the literature as a component of rural nursing practice (MacLeod, et al. 1998). However both rural and non-rural nurses rate professional interactions and professional status in the top three components for satisfaction and importance. Therefore what the nurses are satisfied with, and what is important to them are closely aligned. The literature discusses the broad range of knowledge and skills that are needed for rural nursing (Bigbee, 1993) and rural public health nurses (Bushy, 1996, 2000; Leipert, 1999). This broad range of knowledge tends to be termed "generalist" but whether specialization promotes professional status is arguable. Leipert (1999) found that public health nurses in one and two nurse offices had less chances of specializing. The comments from the respondents in this study verified that specialization was difficult for rural public health nurses but other comments supported that rural public health nursing was specializing in its own right.

Retention can be positively affected by the benefits and rewards the nurses perceive as important to them (Stratton, et al. 1995). The three most important benefits to this sample of public health nurses are vacation, retirement and inservice education. Vacation time is the most valued benefit. The importance of retirement benefits to this sample of public health nurses reflects their age group, with 73% of the public health nurses over 40 years of age. The last 5 years of work are important for maximizing retirement benefits and 33% of

this sample is over 50 years of age. Therefore the importance of retirement benefits is not surprising. The benefit "inservice" addresses two issues in rural nursing "staying current" and having professional interaction. The ability to stay current will be discussed in relationship to the community but will be discussed here in relationship to work. Both nurses and the employers have a responsibility in the nurses' ability to stay current (Griffiths, 1999). Inservices for public health nurses are one way employers provide educational updates. Inservices are usually held in a central location, for example at the main public health office, which allows the public health nurses who are geographically isolated to travel in for the inservices. This provides peer interaction and access to amenities in a larger centre, which decreases the sense of professional and geographical isolation.

Professional isolation can be decreased by telephone conferences with peers. The rural public health nurses perceived this as more important than their non-rural counterparts. This should not replace inservices, however it is a less expensive way to network and could be used to supplement inservices.

Community Satisfaction

The community is considered the setting for the job and inevitably has an impact on the public health nurses' personal lives and their public health nursing practice. This research piloted a scale to determine community satisfaction for public health nurses. The community satisfaction scale does not reveal what aspects of the community would cause public health nurses to leave a community. It does add to our understanding of what public health nurses find

satisfying or dissatisfying in their community and enables the researcher to score community satisfaction. Although this research used a previously tested questionnaire the items for community satisfaction in the original questionnaire were limited as listed in the Methods chapter.

There were 16 items (See Table 25) in the present questionnaire to examine community satisfaction. Even though the content validity of the scale was based on the literature review and the researcher's personal experience, the responses from this sample of public health nurses helped to refine the content validity and shorten the scale.

The researcher determined the minimum number of items for the community satisfaction scale was seven. These items reflected general aspects of the community. These were "friendly", "trusting", "social and recreational opportunities", "friends", "quality of schools (K-12)", "safety" and "size of the community". These were the same items identified by Filkins et al. (2000). However, Filkins et al. also identified "place of worship" and "local government". These items were omitted here because the public health nurses in this sample did not indicate these items were as important to them. The 7-item scale as tested gave a reliable operational definition (α = .793) for community satisfaction which could give a general community satisfaction score.

The community's acceptance of spouse was not kept in the scale. Although public health nurses (79%) were satisfied with this aspect of the community they did not indicate it was as important to them as some other aspects of the community. Some had no partners. Even though it could be

argued that some had no children therefore any aspect related to children could be omitted, this sample of public health nurses have indicated the "overall environment for children" (94%) and "quality of schools" (86%) as more important than "community's acceptance of partner" (83%). Therefore "quality of schools" has been retained in the scale because it was used by Filkins et al. (2000).

The realities of rural nursing practice, including public health nursing practice are physical and professional isolation from other nurses (Davis & Droes, 1993; Hegney, 1996b; MacLeod, et al. 1998), familiarity within the community (Bigbee, 1993; Bushy, 1996, 2000; Hegney, 1996b; Leipert, 1999) and lack of anonymity (Bigbee; Bushy, 2000; Hegney, 1996b; Leipert). The researcher surmised that over time these community aspects could affect the rural public health nurses' satisfaction with their community. Therefore "level of anonymity", "consulted on work issues outside of work", "distance away from major centre", and "ability to stay current in your practice" were included. This 12-item scale which is the 11-item scale plus "overall community satisfaction" gave a scale that is minimized and has internal consistency (α = .844). This 12-item scale is used to describe the public health nurses' overall community satisfaction in this research.

In general, public health nurses felt more satisfaction with their community (M = 3.50) than with their job (M = 3.33). It was noted that the younger cohort rated satisfaction with the job (M = 3.32) and the community (M = 3.16). The public health nurses' age and their number of years living in the community did not reveal a relation to overall community satisfaction. A larger number (77%) of

the public health nurses in general have lived in their community for five or more years. With only 46% of public health nurses feeling socially isolated in this sample it could be demonstrating the *Gemeinschaft* nature of rural communities. The public health nurses are known and know the community well, along with the "adoption" of neighbours and friends in place of extended family (Leipert, 1999). Conversely, a larger number (68%) of the younger cohort have lived five years or less in their community with 62% of the younger cohort reporting social isolation. A reason for the younger cohort to feel less satisfied in the community could be lack of feeling "connected" to the community (Cutchin, 1997; Leipert, 1999). This could be due to fewer years in the community.

The four community aspects that are most important (Table 26) to public health nurses are ability to stay current, safety, overall environment for children and friends. Research by Leipert (1999) supported that rural public health nurses valued their friends and safety. Her research indicated that sports and recreational opportunities were also valued. However the four most satisfying (from the scale items) were a friendly community, friends, a trusting community, and the size of community.

The younger cohort identified that the most important aspect of the community was their ability to stay current which was rated over safety, whereas the total sample rated these aspects equally important. All were least satisfied with the distance their community was from a major centre.

The ability to stay current affects both public health nurses' job satisfaction and community satisfaction. This item is included in community satisfaction

because size of community and distance to a larger centre can affect availability and ease in obtaining educational up-dates. Staying current is a responsibility of public health nurses as a professional standard (Griffiths, 1999) regardless of whether their employer helps or not.

Public health nurses agreed staying current in their practice is important, yet less than half are satisfied with their ability to stay current. In fact, 64% of the total sample and 83% of the younger cohort report geographical isolation; this can contribute to the difficulty public health nurses have to stay current. Many of the respondents report barriers to their ability to stay current. Some of these are the annual financial limit of $400.00 towards tuition and conferences as well as other incurred costs (financial and otherwise) of being away from home and work. These include time spent travelling, hotel and related costs, plus no work coverage for them when they are away. This was consistent with the research by Hegney et al. (1997). Other costs not mentioned, but which would be expected with a younger cohort of public health nurses, would be extra childcare expenses when the public health nurses are away from home.

Rural public health nurses perceived they had lower anonymity than non-rural nurses. Yet, public health nurses were not dissatisfied with their level of anonymity in their community, whether it was low or high. Low levels of anonymity or lack of anonymity did not appear to be the issue for rural public health nurses in this study. This reflects the results found by Remus et al. (2000). Rather, for the respondents in this study, the issue of concern was the side effect of low anonymity and familiarity, that is, being consulted about work

related concerns outside of work hours. The present research identified this as the issue that dissatisfies rural public health nurses. The effect of being consulted outside of work has been well documented (Bushy, 2000; Hegney, et al. 1997; Leipert, 1999), in that nurses have a sense of "never being off duty" (Hegney, et al). Twenty-seven percent of the rural public health nurses were dissatisfied with this aspect of the community as compared to only 5% of non-rural public health nurses. However, 41% of rural public health nurses were neutral about being consulted outside of work. Obviously, there were public health nurses who were not bothered by being consulted, and others who could fend off the questions with comfort. Caution should be used, therefore when conceptualizing and defining or rejecting the importance of anonymity, because other aspects of satisfaction or dissatisfaction related to anonymity in a rural community could be missed.

Rural public health nurses ranked social and recreational opportunities in eighth place whereas non-rural public health nurses ranked the same item as second place for satisfaction. The younger cohort was also less satisfied with this aspect of their community. The difference between the rural and non-rural public health nurses was significant at $p = .05$. However, when social and recreation opportunities were examined with more rigorous testing ($p = .01$) this item was no longer significant. Yet, it would seem logically that social and recreational opportunities are different between rural and non-rural communities in what is available or the number of choices. Lack of choice of social and recreational opportunities has been identified as a detractor for some nurses and

their families causing them to leave a community (Canitz, 1992). The public health nurses in this study reported the need for a larger community, advanced education for their children and for themselves, and to be closer to family as reasons they would leave their community.

Effect of Filter Factors on Retention

Retention of a nursing workforce is one strategy to minimize the effects of a nursing shortage (CNA, 1997). In this sample retention has already occurred for half of the public health nurses. This emphasizes the need to know what does affect retention. The filter factors are grouped into the nurses' demographic characteristics, personal circumstances, and opportunities of the public health nurses and their families. Personal circumstances refer to factors that the public health nurses impose upon themselves or have some control over for example, early retirement. Whereas, opportunities are imposed on them by actions of others, giving the public health nurses only the opportunity to accept or decline for example, job availability. Some filter factors can cross into another filter category. For example, age is a demographic factor but affects retirement under personal circumstances. Likewise, "married" is a demographic factor but has implication under opportunities, that is, moving because of spouse's job. The filter factors can influence whether the nurses will stay or leave their public health nursing positions.

Demographics of the Public Health Nurses

The demographic filter factors of this sample of public health nurses are; age, place of nursing education, and married (which relates to the spouse's

occupation). Although the mean age of this sample is 42.5 years, age has not increased dramatically from Tomich's (1993) province wide study which found public health nurses age, *M* = 41.2 years. This present sample of public health nurses has a higher percentage of nurses under 35 years when compared to the provincial profile prepared by the RNABC. It appears that a sufficient number of younger nurses have entered public health nursing to maintain a lower mean age.

The RNABC (2001a) has noted a decrease in the registration of all nurses over the age of 58. Public health nursing is a less physically demanding job than acute care nursing therefore public health nurses could conceivable work longer. However, some of these public health nurses cite their reason for leaving public health nursing is because their husband will be retiring while others mentioned early retirement for themselves.

Hegney et al. (1997) identifies that as the age of the nurse increases so does job satisfaction. Irvine & Evans' (1995) research found a low correlation between age and job satisfaction. However, this study did not find any correlation between age and job satisfaction. Public health nurses need to have job satisfaction to maximize the number of years they will want to work and possibly prevent early retirement. Ultimately age will undermine retention regardless of job satisfaction.

Half of the public health nurses in this study have been employed for 5 years or longer in their present public health position and half indicate that they will stay for another 5 years or more. However, 27% report they will leave in the

next two years. Some of the nurses will be leaving due to retirement since 17% have reported they are 55 years and older. It becomes apparent that within the next 2 to 5 years the need for recruitment will increase and become the dominant issue.

Retention strategies need to target the younger age group. These nurses are 35 years or younger (26%) have lived in their community 5 years or less (68%), have been in public health nursing 5 years or less (75%), and have reported that 43% plan to leave their job in 2 years or less. Although some older nurses have entered public health nursing in the last 5 years, retention of nurses 35 years or younger will help to lessen the nursing shortage. These are the nurses who need job satisfaction to stay. Age will promote retention in the younger cohort group and limit retention in the older cohort group. The older cohort of public health nurses need job satisfaction so they will not retire early. Yoder (1995) contends that job satisfaction increases for nurses with mentoring. Therefore it will be important to continue to have a mix of experienced and new public health nurses not only for knowledge sharing but to mentor the younger cohort, possibly enhancing job satisfaction.

The supply of nurses for positions in British Columbia not only comes from British Columbia but from other provinces and countries (RNABC, 2001a; Solving Nurse Shortage, 2000). This sample is no different, 50% of public health nurses have had their nursing education outside of British Columbia, in particular Ontario, Alberta and Saskatchewan. RNABC (2001a) predicts that competition for nurses will come from all provinces and other countries, not just from British

Columbia. Since the nurses in this sample have cited unhappiness with their salary as a reason to leave their job. British Columbia must offer competitive salaries to effectively recruit and retain nurses for needed positions.

Married public health nurses may have partners whose occupations reflect the resource based economy British Columbia is known for, in particular the forest industry (17%). The younger cohort was less likely to have partners in the forest industry (7%). As well, many public health nurses (23%) are married to other "needed professionals", for example, teachers, doctors, and dentists. Since public health nurses are predominantly female and the majority are not the sole family providers, it was not surprising that a typical comment for leaving their public health nursing position was a change in employment for their spouse. Two-thirds (60%) of the respondents indicated it would be easy for their partners to find other employment, this supports the concept that marriage to a partner (in a needed occupation) can limit retention of public health nurses. This would be due to the partner's career flexibility and desire to relocate for example a spouse who is a RCMP member. Public health nurses who are married could stay or leave depending on their spouses' employment.

Personal Circumstances

Other filter factors are related to the public health nurses' personal circumstances. These are factors the nurses have some control over. These involve financial need, family commitments and the nurses' perceived need for professional growth. Some public health nurses admit to financial debt that keeps them working at their jobs. Others recognize that as their children pursue

advanced education the need for income remains important and keeps the nurses in their jobs. Thus, financial need promotes retention.

The public health nurses' family commitments either make them stay or leave their position. Many of the nurses say they are staying in their present job because of commitment to their family and friends in the community. The nurses are also staying to create stability for their children who are in high school. Others would leave their jobs to take care of sick and aging parents. As well, they would leave if a family member needed more medical care than could be offered in their community.

Professional growth, an aspect of professional status which public health nurses value and find satisfying, is also a reason for leaving their public health nursing position. The nurses said they would leave to experience other practice settings and to advance their education.

Two aspects of benefits and rewards promote retention. Public health nurses are remaining in their jobs for the pension benefits as previously discussed in job satisfaction. Hence, pension benefits promote retention by retaining public health nurses who do not want to forfeit pension benefits by moving and changing jobs. An intangible benefit of public health nursing is the lack of shift work. Public health nurses like their hours of work and the fact they do not do shift work. They report that this aspect of their job would keep them in their present position.

Opportunities

Issues, outside of demographics and personal circumstances, related to retention are opportunities. Opportunities are beyond public health nurses' control other than choosing to accept or decline what is offered. The down turn in British Columbia's economy can effect the spouses' occupation, employment in general and the economic climate of the community. The spouse has to have an occupation that is needed and can be supported in the community to promote retention for public health nurses. The overall economic climate in the resource communities of British Columbia, for example forestry, may cause an increase in attrition of public health nurses if the spouse is transferred, loses job, or is promoted to a larger centre. Conversely, the economic climate can cause retention when public health nurses are unable to sell their houses or refuse to sell their houses at a loss. Likewise, retention is promoted if public health nurses are tied to the community until their husbands' change jobs. Hegney et al. (1997) found nurses stayed because of their husbands' employment. These factors point to the broader role of the economic health of a community in retention.

One benefit, portability, lost to contract bargaining has been identified by this sample of public health nurses. This lost benefit has created a lost opportunity for public health nurses but is positive for retention. Prior to March 1998, community nurses had portability of seniority, wage level, and benefits between public health nursing jobs throughout the province. This benefit has been lost with the amalgamation of contracts between the acute and community nurses. This amalgamation was initiated because of regionalization and

devolving to local health authorities. Animosity among public health nurses has remained about the losses. At the same time, this loss of portability as it relates to pension benefits promotes retention.

Job availability can promote retention when there are no alternative attractive employment positions and limit retention when other employment opportunities are available. Public health nurses cite the economic downturn and the loss of portability as reasons for remaining in their present position. In this sample of public health nurses, 75% felt there were no attractive employment opportunities in nursing in or near their community. Dunkin, Stratton, et al. (1994) reported that the more nursing opportunities public health nurses have to choose from the more job satisfaction they have. The nurses who are staying because of "economic down turn" or "lack of portability" or "too close to retirement" may not necessarily have job satisfaction.

A number of public health nurses reported a serendipitous event such as an inheritance or a lottery winning would cause them to leave their jobs. This finding was unexpected. Good fortune for the public health nurses would be negative for retention. How likely these events would occur is unknown but it does indicate some underlying dissatisfaction with their job.

Conclusions

By using the questionnaire from Dunkin et al. (1992), the present research found that this sample of public health nurses in British Columbia reported similar satisfaction with work components as their American counterparts. Professional status, professional interaction and autonomy were the top three work

components that were satisfying for public health nurses in both studies, albeit in a different order. Public health nurses in both studies ranked the same top three work components as important but in a different order. The public health nurses in British Columbia rated professional interaction (first), professional status (second) and salary (third). Both samples of nurses were least satisfied with the salary component. However, this study did not support Dunkin's et al. (1992) finding that job satisfaction increased retention. Even when casual employees and public health nurses who would retire within five years were removed from the sample, this study did not find job satisfaction and retention to be related.

Job and community satisfaction are related, however neither have a relation to retention. Even so, comments from the respondents suggest that job and community satisfaction are still important factors to consider in retention. The public health nurses also report other factors are present that filter job and community satisfaction. The duality of the filter factors promote some to stay (retention) and limit retention for others.

The economic climate and lack of portability of benefits between health authorities have a positive affect on retention. Public health nurses are remaining in place when they otherwise would leave, because if they leave they would be losing a number of years of seniority and benefits. A lack of portability can work against recruiting and retaining new public health nurses because nurses may take a rural position for a few years but not invest a number of years when they know they will lose the seniority and benefits accumulated during

those years. Public health nurses need to remain in their jobs due to contentment rather than because opportunities make it difficult for them to move.

The emphasis should be on retaining the younger cohort using the information they have provided in this study. Due to their age, they have more work years left. Therefore retirement will not be a filter factor. As mentioned, "loss of portability of benefits" may not be a filter factor that retains the younger cohort because they have less to lose than an older public health nurse with several years of service. However this younger cohort has indicated they value the ability to stay current and they have reported greater feelings of geographical, professional and social isolation. Therefore organizations that can promote and enable these younger nurses to stay current and decrease their sense of professional and social isolation will enhance satisfaction with the job and community for these younger nurses.

Retention of public health nurses in rural British Columbia is a complex issue. Certainly public health nurses have positive responses about their overall job, their professional status, their interactions with peers and coworkers, and their autonomy. Although they express dissatisfaction with their salary and aspects of the organizational climate, which some gave as reasons they would leave their jobs, it is not known if they would act on their intent to leave. Likewise public health nurses have positive feelings towards the community they live in. They are satisfied with the safety, friendliness, their friends in the community and the environment for their children. These are all compelling reasons for some

public health nurses to remain in their position. The younger nurses are less satisfied with the distance their communities are away from a larger centre.

The filter factors can have an impact on whether retention occurs or not. Retention can be limited for any of the following reasons: age near retirement, partner who can be easily employed elsewhere, partner whose employment can be affected by a down-turn in the economy, commitment to family living somewhere else, a need for professional growth either by returning to school or choosing another practice setting, and a serendipitous event. However, retention can occur for the following reasons: young with more years to work, partner who has stable employment in the community, occupation skills that are not affected by the economy, debt, the desire for regular Monday to Friday hours and no shift work, poor real estate market, job availability and loss of portability of benefits. Retention is influenced by filter factors regardless of the public health nurses' satisfaction or dissatisfaction with their job or community. It is still important to know what is satisfying and dissatisfying about the job and the community because the perceived satisfaction with these two aspects may be the deciding factor, consequently, "swaying" the public health nurses to act on their intent to stay or leave.

Issues in Implementing the Study

Issues that became apparent during the research have been grouped into the categories of rural and questionnaire for discussion purposes.

Rural. By the Rural and Small Town definition the entire health region of West Kootenay Boundary is rural. Castlegar and Nelson are the large offices

with five public health nursing positions each, at the time of the survey. Public health nursing managers are resident in both offices. The Castlegar office, the main office, will be the support for the region, similar to other main offices that are non-rural. These rural offices that function similar to non-rural offices may modify the differences between rural and non-rural public health nurses. This type of office may mask the actual difference between rural and non-rural public health nurses on specific job components, for example organizational climate. It would also follow that the community sense may be different in these larger, yet rural centres because they double as the main economic centre for the region.

The nurses' perceptions of the rurality of their community could have an effect on retention that is not explored. For example, nurses in remote rural villages within a single day drive to Vancouver may not feel as isolated as nurses in larger centres with amenities but their access to Vancouver takes two days.

The questionnaire. Some limitations were due to the format of the questionnaire and did not become apparent until data entry. The respondents noted that the questionnaire took them longer than 30 minutes to complete. Respondents also cited frustration with the size of the print and not enough space between questions and lines. This was demonstrated when some respondents circled a response twice on one line and missed the following line. A number of respondents expressed difficulty with understanding how "importance" was to be rated. This could explain why some respondents omitted rating the importance of the job and community satisfaction items. More experienced researchers have expressed concerns that the importance item is

confounding (personal communication, N. Stewart, June 20, 2001). Therefore the importance measurement needs to be separate from the satisfaction measurement for each component.

Dunkin's study had some low alpha coefficients that put in question the internal consistency of some of the job component scales. The scales did not have an equal number of items therefore averaging each score of the job component was needed for ranking. Therefore, these methodological weaknesses were carried over to this present study. The alpha coefficients for this present study improved on some scales ranging from .429 to .759, with "benefits and rewards" (α = .429) and "organizational climate" (α = .584) being the lowest. Therefore, these issues limited some interpretations of the data to description only. Even so, this research has initiated some insight into rural public health nursing practice in British Columbia.

It should be noted that while this thesis research was being completed other similar Canadian nursing research was taking place. A study by Remus et al. (2000) used a questionnaire with similar questions and work components to Dunkin et al. (1992). Another study (with the questionnaire based on some of Dunkin et al. research) is still in progress "Nursing Practice in Rural and Remote Canada" (MacLeod, Kulig, Pitblado, & Stewart, 2001) using both quantitative and qualitative data. This research will give a more in depth view of various rural nursing practice settings and job satisfaction along with community and life satisfaction. Either of these studies should be examined for future use because of their refinement and expansion of scale development for job satisfaction.

Implications of the Findings

The findings of this research have implications for health authorities, managers of public health nurses and overall health policy.

For Health Authorities and Public Health Nursing Managers

Even though retention is a complex issue, public health nursing management and health authorities need to address the components they can control. Obviously, some of these are out of the immediate control of health authorities such as spouse's occupation and what the community has to offer. Health authorities and the managers they employ can enhance aspects of job satisfaction. The public health nurses in this sample have clearly stated the "ability to stay current" is important. The nurses want to have contact and support from public health nursing managers who are familiar with public health nursing issues. Public health nurses do not want to be consulted on work issues outside of work and they value their vacation time. All of these issues can be addressed by health authorities and managers.

Health Authorities need to develop creative ways to help public health nurses stay current in their practice. These solutions should be identified by the nurses so that the solutions meet their needs. One creative solution could be short-term exchanges between rural and non-rural offices so public health nurses can share their expertise and learn from others. Health authorities need to set aside educational money that encompasses these creative solutions including relocation, travelling, meals, daycare expenses and "back filling" while public health nurses are away for education.

Public health nurses suggest that one way to recognize the importance of public health nurses is to cover their positions when they are away from work. Health authorities could fund for coverage for holiday and sick relief, as well as recruiting and training relief staff for these positions. Health authorities could recognize the expertise of public health nurses and incorporate them into advisory committees to allow them a "voice" in planning, not only at the regional level but assure them a position in planning at a local level when they are managed by a non-public health nurse manager. Another part of this "recognizing importance" is for managers and public health nurses to define a vision and goals, then work together to attain the goals.

Health authorities could initiate programs to help health providers to deal with infringement of their private time such as education in assertiveness training and conflict resolution.

Vacation has been identified as the most important benefit. Therefore health authorities can use this knowledge for a retention and recruitment strategy by offering a deferred salary leave program similar to what the school boards offer their teachers. Deferred leave programs authorize a year of leave for any reason that public health nurses feel they need at the time, from education to fun or trying another job, without loss of seniority, other benefits and vacation time accruement.

For Public Policy

Job satisfaction theory offers an explanation as to why and how public health nurses have contentment in their jobs. Job satisfaction is only one part of

the retention model for public health nurses as developed by Dunkin, Stratton, et al. (1994). This model gives a very micro or personal view. However job satisfaction and retention may need more of a macro view within the province of British Columbia.

There have been many changes to the health care system, such as a decrease in transfer payments from the federal government, regionalization, inequities where rural doctors are given money but nurses are not, and management of public health nurses by non nurses or non public health nurses. Therefore, on a personal level public health nurses may like their job but they feel dissatisfied with the organizational context in which they work. Several of the public health nurses who were surveyed said that they were frustrated by the way in which their work role was administered. Job satisfaction is dynamic; various influences could change how public health nurses feel about their job at any given time. Consequently, health care policy should support public health nurses to be more actively involved in how their work life is managed.

Public health nurses could help shape health care policy to support their role and the communities they serve by participating on advisory committees to policy makers. Public health nurses could contribute their knowledge of rural communities and their knowledge of the role they play in prevention, for example injury prevention, immunization and healthy outcomes for mothers and children, which can reduce the demands on the acute health care system. Public health nurses, with their experience in community development and health promotion, can provide valuable information on what is needed and how policy could be

implemented to support them and their rural communities. The Ministry of Health needs to ensure that policies and adequate funding for public health nursing positions extend to health authorities so that public health nurses feel valued and supported in their work at all levels. This would help to retain public health nurses working at the community level providing continuity of service to communities in rural British Columbia.

Future Research

Findings in this study are suggestive that future research is needed. Future studies can validate and expand on the results found in this research.

1. Extend this study with a province-wide sample to examine urban and non-urban, rural and non-rural public health nurses to determine whether differences exist for work components and community satisfaction when health regions that are not predominantly rural are incorporated.
2. To have a more comprehensive understanding of rural retention, research involving public health nurses who have left their positions should be included.
3. Research is needed to further explore the concepts of anonymity and autonomy with respect to public health nurses in rural and non-rural settings. Research can be used to identify the items that would accurately describe the concepts of anonymity and autonomy of public health nurses in rural and non-rural settings. By using this information more comprehensive scales can be developed to test anonymity and autonomy of public health nurses in rural and non-rural settings.

Summary

The purpose of this research was to identify and examine what public health nurses find satisfying in their rural practice and in their rural communities and what effect this satisfaction has on retention in rural British Columbia. For many of the public health nurses, retention had already taken place and the emphasis needs to shift to recruitment. However, retention remains a practical but limited solution for the present nursing shortage. This research found filter factors influence retention regardless of job and community satisfaction. The information identified by the public health nurses in this study, regarding job and community satisfaction as well as the effect of filter factors, can be used by public health nursing managers and health authorities to maximize retention in the younger cohort and prevent early retirement in the older cohort.

REFERENCES

Allen, J. & Filkins, R. (2000). *Optimum rural community size: Relationships between community attributes and residential preference*. Retrieved May 26, 2000, from http:www.ianr.unl.edu/rural/commsat.pdf.

Allen, L. & Beattie, R. (1984). The role of leisure as an indicator of overall satisfaction with community life. *Journal of Leisure Research*, Second quarter, 99-109.

Association of Nurse Executives of Metropolitan Toronto. (1991). *The ANEMT recruitment/retention database project*. Toronto: Association of Nurse Executives of Metropolitan Toronto.

Bailey, M. (1998). Outsider. In H. Lee (Ed.), *Conceptual basis for rural nursing* (pp. 139-148). New York: Springer.

Bigbee, J. (1993). The uniqueness of rural nursing. *Nursing Clinics of North America, 28* (1), 131-144.

Blegen, M. (1993). Nurses' job satisfaction: A meta-analysis of related variables. *Nursing Research, 42* (1), 36-41.

Bushy, A. (Ed.) (2000). *Orientation to nursing in the rural community*. Thousand Oaks, CA.: Sage.

Bushy, A. (1996). Community health nursing in rural environments. In M. Stanhope & J. Lancaster (Eds.), *Community health nursing: Promoting health of aggregates, families, and individuals* (4th ed.)(pp.315-342). Toronto: Mosby.

Canadian Education Association, (1992). *Teacher recruitment and retention*. Toronto.

Canadian Institute for Health Information (2001). *Canada's nursing workforce aging, more nurses working part-time.* Retrieved July 19, 2001, from http: www.cihi.ca/direct/6july99.shtml.

Canadian Nurses Association. (1997). *The future supply of registered nurses in Canada*. Ottawa: Canadian Nurses Association.

Canadian Nurses Association. (1998). *Registered nurse human resources; Recruitment and retention Issues*. Ottawa: Canadian Nurses Association.

Canadian Public Health Association (1990). *Community health-public health*

nursing in Canada: Preparation and practice. Ottawa: Canadian Public Health Association.

Canitz, B. (1992). Reticence and resignation: Understanding northern nursing turnover. *The Musk-ox, 39* (9), 297-305.

Cater, J., & Jones, T. (1989). *Social geography*. London: Edward Arnold.

Clevett, D., & Maltby, R. (1992). Recruiting for outlying nursing stations. *Nursing Management, 23* (9),124-128.

Cohen, J. (1992). A power primer. *Psychological Bulletin, 112* (1), 155-159.

Cumbey, D., & Alexander, J. (1998). The relationship of job satisfaction with organizational variables in public health nursing. *Journal of Nursing Administration, 28* (5), 39-46.

Cutchin, M. (1997). Community and self: Concepts for rural physician integration and retention. *Social Science and Medicine, 44* (11), 1661-1674.

Davis, D., & Droes, N. (1993). Community health nursing in rural and frontier counties. *Nursing Clinics of North America, 28* (1), 159-169.

Dunkin, J., Juhl, N., Stratton, T., Geller, J., & Ludtke, R. (1992). Job satisfaction and retention of rural community health nurses in North Dakota. *The Journal of Rural Health, 8* (4), 268-275.

Dunkin, J., Pan, S., Muus, K.J., Harris, T. R., & Geller, J. (1994). *Estimating the odds of rural nurse retention*. Grand Forks:The University of North Dakota Rural Health Research Center University of North Dakota School of Medicine.

Dunkin, J., Stratton, T., Harris, T. R., Juhl, N., & Geller, J. (1994). *A predictive model for retention of rural nurses*. Grand Forks:The University of North Dakota Rural Health Research Center University of North Dakota School of Medicine.

Freund, C., & Sarata, B. (1983). Work and community satisfaction of psychologists in rural and nonrural areas. *Journal of Rural Community Psychology, 4* (2), 19-28.

Filkins, R., Allen, J., & Cordes, S. (2000). *Predicting community satisfaction among rural residents: An integrative model*. Retrieved May 26, 2000, from http:www.ianr.unl.edu/rural/commsat.pdf.

Fisher, M., Hinson, N., & Deets, C. (1994). Selected predictors of registered nurses' intent to stay. *Journal of Advanced Nursing (20)*, 950-957.

Griffiths, H. (1999). A shared responsibility: Employers supporting continuing competence. *Nursing BC (August-September)*, 24.

Hamilton, J., Gillies, J., Ross, S., & Sullivan, F. (1997). Attitudes of general practitioners who practice in remote island communities. *Health Bulletin, 55* (2),103-108.

Hays, R., Veitch, P., Cheers, B., & Crossland, L. (1997). Why doctors leave rural practice. *Australian Journal of Rural Health, 5* (4), 198-203.

Hegney, D. (1996a). The status of rural nursing in Australia: A review. *Australian Journal of Rural Health, 4* (1), 1-10.

Hegney, D. (1996b). *The windmill of rural health: A Foucauldian analysis of the discourses of rural nursing in Australia, 1991-1994*. Unpublished doctoral dissertation, Southern Cross University.

Hegney, D., Pearson, A., & McCarthy, A. (1997). *The role and function of the rural nurse in Australia*. N.P.: Royal College of Nursing, Australia.

Hewitt, M., (1992). Defining "rural" areas impact on health care policy and research. In Gesler, W. & Ricketts, T. (Eds.), *Health in rural North America* (pp. 25-54). London: Rutgers University Press.

Ife, J. (1996). *Community development*. Melbourne: Longman

Irvine, D., & Evans, M. (1995). Job satisfaction and turnover among nurses: Integrating research findings across studies. *Nursing Research, 44* (4), 246-253.

Juhl, N., Dunkin, J. W., Stratton, T., Geller, J., & Ludtke, R. (1993). Job satisfaction of rural public and home health nurses. *Public Health Nursing, 10* (1), 42-47.

Kazanjian, A., Grams, G., Pope, A., & Whiteside, C. (1998). Retention of rural physicians: Tipping the decision-making scales. *Canadian Journal of Rural Medicine, 3* (4), 209-216.

Kazanjian, A., Pagliccia, N., Apland, L., Cavalier, S., & Wood, L. (1991). *Study of rural physician supply: Practice location decisions and problems in retention* (Health Policy Research Unit 991:2). Vancouver, B.C.: University of British Columbia.

Kazanjian, A., & Wood, K. (1993). *Nursing resources in British Columbia: Trends, tensions and tentative solutions* (Health Policy Research Unit 93:5D). Vancouver, B.C.: University of British Columbia.

Layton, D. (1998). *Influence of the workplace on nurse manpower supply in British Columbia* (The nurse manpower study: Volume III). Vancouver, B.C.: University of British Columbia.

Lee, H. (1991). Definitions of rural: A review of the literature. In A. Bushy (Ed.), *Rural nursing Vol. 1* (pp. 7-20). Newbury Park: Sage.

Lee, H. (1998). Lack of anonymity. In H. Lee (Ed.), *Conceptual basis for rural nursing* (pp. 76-88). New York: Springer.

Leipert, B. (1996). The value of community health nursing: A phenomenological study of the perceptions of community health nurses. *Public Health Nursing, 13* (1), 50-57.

Leipert, B. (1999). Women's health and the practice of public health nurses in northern British Columbia. *Public Health Nursing, 16* (4), 280-289.

Lucas, M., McCreight, L., Watkins, J. & Long, S. (1988). Job satisfaction assessment of public health nurses. *Public Health Nursing, 5* (4), 230-234.

Macionis, J., Benoit, C., & Jansson, S. (1999). *Society: The basics*. Scarborough, ON.:Prentice Hall Allyn and Bacon Canada.

MacLeod, M. (1999). "We're it": Issues and realities in rural nursing practice. In W. Ramp, J. Kulig, I. Townshend, & V. McGowan (Eds.), *Health in rural settings: contexts for action* (pp.165-178). Lethbridge: University of Lethbridge.

MacLeod, M., Browne, A., & Leipert, B. (1998). Issues for nurses in rural and remote Canada. *Australian Journal of Rural Health, 6*, 72-78.

MacLeod, M., Kulig, J., Pitblado, R., & Stewart, N. (2001). *Nursing practice in rural and remote Canada.* Study in Progress. Retrieved November 3, 2001, from http://ruralnursing.unbc.ca.

McMillan, J., & Schumacher, S. (1997). *Research in education* (4th ed.). New York: Longman.

McNeely, A., & Shreffler, M. (1998). Familiarity. In H. Lee (Ed.), *Conceptual basis for rural nursing* (pp. 89-101). New York: Springer.

McNeese-Smith, D. (1997). The influence of manager behavior on nurses' job

satisfaction, productivity, and commitment. *Journal of Nursing Administration, 27* (9), 47-55.

Mendelson, R., & Bollman, R. (1998). Rural and small town population is growing in the 1990s. *Rural and small town Canada analysis bulletin.* Retrieved May 5, 2000, from http://www.statcan.ca/english/freepub/21-006-XIE/19990021-006-XIE.pdf.

Ministry of Finance and Corporate Relations. (1999). BC stats. *Population Section.* Retrieved May 12, 1999, from http://www.bcstats.gov.bc.ca/data/pop/pop/sha/HR9698.htm.

Ministry of Health Planning. (2001). Maps of B.C.'s health authorities. *Health authorities.* Retrieved January 19, 2002, from http://www.healthplanning.gov.bc.ca/socsec/maps.html.

Morrison, R., Jones, L., & Fuller, B. (1997). The relation between leadership style and empowerment on job satisfaction of nurses. *Journal of Nursing Administration, 27* (5), 27-34.

Mueller, C., & McCloskey, J. (1990). Nurses' job satisfaction: A proposed measure. *Nursing Research, 39* (2), 113-117.

Myers, D. (1998). Insider. In H. Lee (Ed.), *Conceptual basis for rural nursing* (pp. 125-138). New York: Springer.

Northern and Rural Health Task Force. (1995). *Report of the Northern and Rural Health Task Force.* Victoria, B.C.: Ministry of Health and Ministry Responsible for Seniors.

Pan, S., Dunkin, J., Muus, K., Harris, T., & Geller, J. (1995). A logit analysis of the likelihood of leaving rural settings for registered nurses. *The Journal of Rural Health, 11* (2), 106-113.

Pitblado, R., & Pong, R. (1999). *Geographic distribution of physicians in Canada.* Sudbury, Ontario: Laurentian University, centre for Rural and Northern Health Research.

Polit, D., & Hungler, B. (Eds.). (1999). *Nursing research* (6th ed.). Philadelphia, PA: Lippincott.

Pong, R., & Pitblado, R. (2001). Don't take "geography" for granted! Some methodological issues in measuring geographic distribution of physicians. *Canadian Journal Rural Medicine, 6* (2), 103-112.

Provincial Collective Agreement between Health Employers Association of British

Columbia and Nurses' Bargaining Association. April 1, 1998-March 31, 2001. Vancouver, B.C.: Author.

Registered Nurses Association of British Columbia. (2001a). *The Nurse Shortage*. Retrieved March 27, 2001, from http://www.rnabc.bc.ca/newnews/shortage.html.

Registered Nurses Association of British Columbia. (2001b). *Registered nurse characteristics*. Vancouver, B.C.: Author.

Remus, G., Smith, B., & Schissel, B. (2000). *Creating supportive environments for registered nurses in Saskatchewan*. Saskatoon, SK: University of Saskatchewan.

Rennie, D., Baird-Crooks, K., Remus, G., & Engel, J. (2000). Rural nursing in Canada. In A. Bushy (Ed.), *Orientation to nursing in the rural community* (pp. 217-231). Thousand Oaks, CA.: Sage.

Report of the British Columbia Royal Commission on Health Care and Costs. (1991). *Closer to home*. Victoria, B.C.: Ministry of Health and Ministry Responsible for Seniors.

Reutter, L., & Ford, J. (1996). Perceptions of public health nursing: Views from the field. *Journal of Advanced Nursing, 24*, 7-15.

Roedel, R., & Nystrom, P. (1988). Nursing jobs and satisfaction. *Nursing Management, 19* (2), 34-38.

Schaefer, R., Lamm, R., Biles, P., & Wilson, S. (1996). *Sociology*. Toronto: McGraw-Hill Ryerson.

Solving the nurse shortage: RNABC's 10-point plan. (2000, RNABC/December). *Intouch*, 1-4.

SPSS for Windows 7.5.1 [computer software]. (1996). SPSS Inc.

Stamps, P. (1997). *Nurses and work satisfaction: An index for measurement*. Chicago, IL: Health Administration Press.

Stamps, P., & Cruz, N. (1994). *Issues in physician satisfaction*. Ann Arbor, Michigan: Health Administration Press.

Stamps, P., & Piedmonte, E. (1986). *Nurses and work satisfaction*. Ann Arbor, Michigan: Health Administration Press Perspectives.

Statistics Canada. (2000). *Statistical profile of Canadian communities census 1996.* Retrieved May 15, 2000 from http://statcam.ca/english/profil/PlaceSearchForm1.cfm.

Stratton, T., Dunkin, J., Juhl, N., & Geller, J. (1993). Recruiting registered nurses to rural practice settings: An assessment of strategies and barriers. *Applied Nursing Research, 6* (2), 64-70.

Stratton, T., Dunkin, J., Juhl, N., & Geller, J. (1995). Retainment incentives in three rural practice settings: Variations in job satisfaction among staff registered nurses. *Applied Nursing Research, 8* (2), 73-80.

Stratton, T., Dunkin, J., Jubl, N., Ludtke, R., & Geller, J. (1991). Recruiting and retaining registered nurses in rural community hospitals. *Journal of Nursing Administration, 21* (11), 30-34.

Stewart, M., & Arklie, M. (1994). Work satisfaction, stressors and support experienced by community health nurses. *Canadian Journal of Public Health, 85* (3), 180-184.

Sutermaster, D. (1998). Newcomer. In H. Lee (Ed.), *Conceptual basis for rural nursing* (pp. 113-124). New York: Springer.

Thompson, A., & Alexander, A. (1998, September) *An analysis of the empirical literature on the characteristics of rural health professionals.* Paper presented at the Health in Rural Settings Conference, Lethbridge, Alberta.

Tomich, M. (1993). *Job satisfaction and role conflict among community health nurses.* Unpublished master's thesis, University of British Columbia, Vancouver, British Columbia, Canada.

Vital Statistics Agency BC. (1999a). *British Columbia health region map.* Retrieved May 6, 1999, from http:www.hlth.gov.ca/vs/stats/indicators/vol-/#conv.

Vital Statistics Agency BC. (1999b). *Health region local health area conversion table, with population estimate.* Retrieved May 6, 1999, from http:www.hlth.gov.ca/vs/stats/indicators/vol-/#conv.

Vroom, V. H. (1964). *Work and motivation.* New York: John Wiley & Sons.

Weinert. C., & Long, K. (1991) The theory and research base for rural nursing practice. In A. Bushy (Ed.), *Rural nursing Vol. 1* (pp. 21-38). Newbury Park: Sage.

Wolfenden, K., Blanchard, P., & Probst, S. (1995). Recruitment and

retention: Perceptions of rural mental health workers. *Australian Journal of Rural Health, 4* (2), 89-95.

Woodcox, V., Isaacs, S., Underwood, J., & Chambers, L. (1994). Public health nurses' quality of worklife: Responses to organizational changes. *Canadian Journal of Public Health, 85* (3), 185-187.

Yoder, L. (1995). Staff nurses' career development relationships and self-reports of professionalism, job satisfaction, and intent to stay. *Nursing Research, 44* (5), 290-297.

Appendix A

Statistics Canada definition for Rural and Small Town Canada Health Unit Regions used in this research and the rural designation of each office.

Rural Definition

Statistics Canada (Mendelson & Bollman, 1998) describes:

Rural and Small Town (RST) Canada as referring to the population living outside the commuting zones of larger urban centres – specifically, outside Census Metropolitan Areas (CMAs) and Census Agglomeration (CAs). A CMA has an urban core of 100,000 or over and includes all neighbouring municipalities where 50 percent or more of the work force commutes into the urban core. A CA has an urban core of 10,000 to 99,000 and includes all neighbouring municipalities where 50 percent or more of the work force commutes into the urban core. Thus, RST Canada represents the non-CMA and non-CA population. It includes all the residents outside the commuting zones of larger urban centres. Only a small share of these resident live on farms. (p. 2)

Health Regions and their offices: * denotes offices that fit the Rural and Small Town definition (Mendelson & Bollman, 1998). Isolation pay as designated by Provincial Collective Agreement (1998). Population as denoted by Statistics Canada (2000) in statistical profile of Canadian communities census 1996.

Cariboo Health Unit: Region #15

Office location	Population	Isolation pay BCNU contract	Address
Williams Lake	CA 38,552 City 10,472		3rd flr,540 Borland V2G 1R8
*Bella Coola	District Municipality DM 1,771	yes	Box 220, V0T1C0
*100 Mile House	DM 1,850		Box 458, 385 Dogwood Cres. V0K 2E0
Quesnel	CA 25,279 City 8,468		511 Reid St. V2J 2M8

Coast Garibaldi Health Unit Region # 11

Office	Population	Isolation pay BCNU contract	Address
*Gibsons	Town 3,732 Regional District RD		Box 78, 494 S. Fletcher Rd. V0N 1V0

	13,075		
*Pemberton	Village 855 RD 2,191		Box 8, Portage Rd. V0N 2L0
Powell River	CA 19,936 Sub Regional D 6,207		4313B Alberta Ave. V8A 5G7
*Sechelt	DM 7,343 RD 13,075 (as Pemberton)		5571 Inlet Ave. Box 1040 V0N 3A0
*Squamish	DM 13,994 RD 13,075 (as Gibsons) Sub Div 1,684		Box 130, 38075 2nd Ave. V0N 3G0
*Whistler	DM 7172 RD 2191 (as Pemberton)		202-4380 Lorimer Rd. V0N 1B4

Northern Interior Health Unit Region # 18

Office	Population	Isolation Pay BCNU contract	Address
Prince George	CA 75,150 City 75,150 Fraser Fort George 13,622	no	1444 EdmontonSt. V2M 6W5
*Burns lake	Village 1,793 Regional District 6,891	yes	Box 301, 744 Centre St. V0J 1E0
*Fort St. James	Village 2,046 Bulkley-Nechako Subd.A 6,891	yes	Box 1257, V0J 1P0
*Vanderhoof	District Municipality 4,401 Bulkley-Nechako Subd.A 6,891(as Ft. St James)	No for PHN (but hospital nurses do)	RR#2 V0j 3A0
*Fraser Lake	1,344	yes	Box 369 V0J1S0
*Mackenzie	District Municipality 5,997	yes	Bag 5000 V0J 2C0
*McBride	Village 740	yes	Box 97 V0J 2E0
*Valemount	Village 1303	yes	Box 1 V0E 2Z0

Peace River Health Unit Region #17

Office	Population	Isolation pay BCNU contract	Address
Dawson Creek	CA 11,125 City 11,125	no	1001-11-th Ave. V1G 4X3
*Chetwynd	District municipality 2,980 Peace River Subd.C. 9,305	yes	Bag 105 V0C 1J0
*Fort Nelson	Town 4,4001 Liard Subd.A. 1,005	yes	Bag 1000 V0C 1R0
Fort St. John	CA 15,021 City 15,021 Fort Nelson-Liard Subd.A 1,005	no	10115-110th Ave. V1J 6M9
*Hudson's Hope	DM 1,122	yes	C/o Chetwynd
*Tumbler Ridge	District municipality 3,775	yes	Box 1090 V0C2W0

Skeena Health Unit Region #16

Office	Population	Isolation pay BCNU contract	Address
Terrace	CA 20,941		3412 Kalum St. V8G 4T2
*Dease Lake	RD 1,001		Box 296 V0C 1L0
*Hazelton	Village 347 RD 2,098	yes	Box 321 V0J 1Y0
*Houston	District municipality 3,934	yes	Box 321 V0J 1Y0
Kitimat	CA 11,136		Box 321 V0J 1Y0
*Masset	Village 1,293		Box 215 V0T 1M0
Prince Rupert	CA 17,414 City 16,714		333 Fifth St. V8J 3L6
*Queen Charlotte City	Not listed	yes	Box 419 V0T 1S0
*Smithers	Town 5,624 Bulkley-Nechako Subd.B. 6,505	yes	Bag 5000 3782 Alfred Ave. V0J 2N0
*Stewart	DM 858 Regional SubD 341	yes	Box 692 V0T 1W0

Upper Island Health Unit Region #14

Office	Population	Isolation pay BCNU contract	Address
Courtenay	CA 54,912 City 17,335		480 Cumberland Rd. V9N 2C4
*Alert Bay	Village 612	yes	Box 4 V0N 1A0
Campbell River	CA 35,183 District muncipality 28,851 Comox-Stratcona Subd.B 5,469		New address
Comox	Town 11,069		1729 Comox Ave. V9N 3Z8
*Gold River	Village 2,041		Box 158, Trumpeter Dr. V0P 1G0
*Port Alice	Village 1,331	yes	C/o Port Hardy
*Port Hardy	District Municipality 5,283	yes	Bag 11000 7070 Market St. V0N 2P0
*Port McNeill	Town 2,925	yes	C/o Port Hardy
*Tahsis	Village 940	yes	Box 426 V0P 1X0

East Kootenay Health Unit Region #1.

Office	Population	Isolation pay BCNU contract	Address
Cranbrook	City 18,131 CA 18,131		1212-2nd St., N. V1C 4T6
*Creston	Town 4,816 RD 8,017		Box 1370, 531-17th Ave. S.,V0B 1G0
*Elkford(Sparwood)	DM 2,729		Box 137, 212 Alpine Way, V0B 2G0
*Fernie	City 4,877		Bag 1000, 302-2nd Ave.,

	RD 3,574		V0B 1M0
*Golden	Town 3,968 RD 3,305		Box 369,907-9th Ave., V0A 1H0
*Invermere	DM 2,687		Box 157, 1100- 10th St. V0A 1K0
*Kimberley	City 6,738		1565 Victoria Ave., V1A 3A2
*Sparwood	DM 3,982		Box 137, 603 Pine Ave., V0B 2G0

West Kootenay-Boundary Health Unit Region #2.

Office	Population	Isolation pay BCNU contract	Address
*Castlegar	City 7,027 RD 8,031		813-10th St., V1N 2H7
*Fruitvale	Village 2,117		Box 10, 1947 Beaver St., V0G 1L0
*Grand Forks	City 3,994		Box 25, 7343-4th St., V0H 1H0
*Greenwood	City 784 RD 15,354		Box 167, 255 Gornment St. V0H 1J0
*Kaslo	Village 1,063	yes	Box 309, 4th St. V0G 1M0
*Nakusp	Village 1,736 RD 8,031	yes	Box 315, Broadway St. V0G 1R0
*Nelson	City 9,585		333 Victoria St. V1L 4K3
*Trail	City 7,696 RD 3,968		1051 Farwell St. V1R 4S9

Appendix B

Original Questionnaire of the UND Rural Health Research Center
Modified Questionnaire
Comparison Chart of the seven Job Satisfaction Components
Review of Stamps and Piedmonte 1986 and Stamps 1997

UND RURAL HEALTH RESEARCH CENTER

University of North Dakota • School of Medicine • 501 Columbia Road • Grand Forks, North Dakota 58203 • (701) 777-3848

Dear Colleague:

As a registered nurse practicing in a rural area, you are undoubtedly aware of the difficulties facing rural health care. Nursing supplies, wage differentials, and staffing patterns are only several of the areas which set our rural environments apart from the urban. Because you are a rural practitioner, your viewpoints and perceptions are an invaluable and imperative resource in examining these issues.

It is for this reason we are inviting your participation in this a study of this very crucial and timely topic. The Center for Rural Health, in collaboration with the University of North Dakota School of Nursing, is conducting the study to identify and examine factors which influence your choice to practice nursing in a rural environment. Although some items require a bit more thought than others, completing the attached questionnaire should take no more than 20 minutes. To ensure that all responses are strictly confidential, we have provided a self-addressed stamped envelope for you to return the completed questionnaire at your earliest convenience.

Since your participation is totally anonymous, we encourage you to be honest in your responses. This study is about rural nurses and is NOT an evaluation of specific individuals or agencies. And, although you are under no obligation to participate in the study, the issues at hand are ones which only you can provide valid insights into. Your returned questionnaire will be taken as evidence of your willingness to participate and your consent to have the information used for the purpose of the study.

Although results of the study may not benefit you directly, findings may be used to formulate subsequent policy recommendations to enhance health care delivery to the citizens of rural America. Upon completion of this study, an abstract of the overall findings from the six-state sample will be sent to nursing directors of all participating agencies. If requested, a personal copy will be forwarded to you directly.

Please accept our appreciation in advance for your participation in the study. Should you wish any further explanation, please feel free to contact us at (701)777-4529 or (701)777-4522. We welcome your involvement in any capacity. Thank you.

Sincerely,

Jeri W Dunkin

Jeri Dunkin, PhD, RN
Director
Rural Health Nurse Specialist Program

Nyla Juhl

Nyla Juhl, PhD, RN
Chair
Family & Community Nursing

RURAL NURSING MANPOWER SURVEY

The following statements have been expressed by nurses. Do you agree? Please respond by indicating strongly disagree (SD), disagree (D), neutral (N), agree (A), or strongly agree (SA). In addition, concepts presented in these statements contribute to job satisfaction. Please indicate how important each of these factors are to you very unimportant (1), unimportant (2), neutral (3), important (4), or very important (5).

		Please circle your response to the statement.					**Please circle the level of importance to you.**				
1.	I have plenty of time to discuss nursing concerns with my colleagues.	SD	D	N	A	SA	1	2	3	4	5
2.	I have little control over my work.	SD	D	N	A	SA	1	2	3	4	5
3.	My co-workers are competent.	SD	D	N	A	SA	1	2	3	4	5
4.	This agency offers opportunities for advancement/promotion.	SD	D	N	A	SA	1	2	3	4	5
5.	In this agency nurses are expected to perform non-nursing tasks.	SD	D	N	A	SA	1	2	3	4	5
6.	A great deal of independence is permitted if not required of me.	SD	D	N	A	SA	1	2	3	4	5
7.	The nursing personnel in this agency are not as friendly and outgoing as I would like.	SD	D	N	A	SA	1	2	3	4	5
8.	Nurse-patient ratios in this agency are conducive to safe patient care.	SD	D	N	A	SA	1	2	3	4	5
9.	Which benefits do you currently receive from this agency:										
	a) health insurance	____ Yes		____ No			1	2	3	4	5
	b) retirement	____ Yes		____ No			1	2	3	4	5
	c) day care (child/elder)	____ Yes		____ No			1	2	3	4	5
	d) vacation/holidays	____ Yes		____ No			1	2	3	4	5
	e) sick/maternity leave	____ Yes		____ No			1	2	3	4	5
	f) tuition reimbursement	____ Yes		____ No			1	2	3	4	5
10.	Too much paper work is required of nursing personnel in this agency.	SD	D	N	A	SA	1	2	3	4	5
11.	I am sometimes required to do things on my job that are against by better professional nursing judgement.	SD	D	N	A	SA	1	2	3	4	5
12.	A good deal of teamwork is present between various levels of nursing personnel in this agency.	SD	D	N	A	SA	1	2	3	4	5
13.	The nursing administrators generally consult with staff on daily problems and procedures.	SD	D	N	A	SA	1	2	3	4	5
14.	Based on feedback from nurses in other agencies, the pay at this agency is fair.	SD	D	N	A	SA	1	2	3	4	5

	Please circle your response to the statement.					Please circle the level of importance to you.				
15. I have too much responsibility and not enough authority.	SD	D	N	A	SA	1	2	3	4	5
16. New employees are not quickly made to feel at home in this agency.	SD	D	N	A	SA	1	2	3	4	5
17. Nurses in this agency are encouraged to participate in continuing education.	SD	D	N	A	SA	1	2	3	4	5
18. Pay scales for nursing personnel need to be upgraded.	SD	D	N	A	SA	1	2	3	4	5
19. I am sometimes given more responsibility in decision making than I am prepared to handle.	SD	D	N	A	SA	1	2	3	4	5
20. Nursing staff have sufficient control of the total number of hours worked.	SD	D	N	A	SA	1	2	3	4	5
21. Considering what is expected of nursing personnel at this agency, the pay we receive is reasonable.	SD	D	N	A	SA	1	2	3	4	5
22. I have the support of my supervisor to make important decisions in my work.	SD	D	N	A	SA	1	2	3	4	5
23. A great gap exists between administration in this agency and the daily problems of nursing service.	SD	D	N	A	SA	1	2	3	4	5
24. I have no doubt in my mind that what I do on my job is really important.	SD	D	N	A	SA	1	2	3	4	5
25. Nursing staff have sufficient control in scheduling their own work shifts in this agency.	SD	D	N	A	SA	1	2	3	4	5
26. The types of activities required of me are reasonable.	SD	D	N	A	SA	1	2	3	4	5
27. I have all the voice in planning policy and procedures that I want.	SD	D	N	A	SA	1	2	3	4	5
28. I am frequently asked to work overtime.	SD	D	N	A	SA	1	2	3	4	5
29. The nursing personnel in this agency do not hesitate to pitch in and help one another when things get in a rush.	SD	D	N	A	SA	1	2	3	4	5
30. I am proud to talk to other people about what I do on my job.	SD	D	N	A	SA	1	2	3	4	5
31. I wish the physicians here would show more respect for the knowledge/skill of the nursing staff.	SD	D	N	A	SA	1	2	3	4	5

	Please circle your response to the statement.					Please circle the level of importance to you.				
32. I have sufficient input into the program of care for each of my patients.	SD	D	N	A	SA	1	2	3	4	5
33. This agency financially rewards advanced training/education.	SD	D	N	A	SA	1	2	3	4	5
34. My earning potential in this agency is reasonable.	SD	D	N	A	SA	1	2	3	4	5
35. I have sufficient time to accomplish my job responsibilities.	SD	D	N	A	SA	1	2	3	4	5
36. I work weekends.	SD	D	N	A	SA	1	2	3	4	5
37. I do not receive some benefits that are important to me.	SD	D	N	A	SA	1	2	3	4	5
38. If I had the decision to make all over again, I would still go into nursing.	SD	D	N	A	SA	1	2	3	4	5
39. Overall, I am very satisfied with my job.	SD	D	N	A	SA	1	2	3	4	5

40. What is your educational background?

	Check all that apply:	Year Degree Received	State or Country Degree Received (ex. Texas)
LPN/LVN	____	_____	_____
Diploma	____	_____	_____
Associate Degree in Nursing	____	_____	_____
Bachelors Degree in Nursing	____	_____	_____
Bachelors Degree in Another Field	____	_____	_____
Masters Degree in Nursing	____	_____	_____
Masters Degree in Another Field	____	_____	_____
Doctoral Degree in Nursing	____	_____	_____
Doctoral Degree in Another Field	____	_____	_____

41. What year were you first licensed to practice as a RN in the United States? _____

42. a. In what state were you first licensed as a RN? _____

b. In what states are you currently licensed? _____

c. How many years (or months if less than 1 year) have you been practicing as a RN? _____

continue on back

43. List your professional job history **over the past 5 years** beginning with your present place of employment.

Length of Employment (in years/ months)	Type of Agency (hospital, nursing home, clinic, home health, community, school, other)	State	Position (staff nurse, Admin., Educ.)	Full/ Part Time	Primary Reason for Change

44. How far do you travel to work? _____ miles (one way)

45. What is the distance in miles to the next nearest health care facility where you could have possible employment? _____ (one way)

46. What is the distance in miles to the nearest community of 50,000 or greater? _____ (one way)

47. Have you been employed outside of nursing in your recent past? _____ Yes _____ No

48. In your community or nearby are there attractive employment opportunities outside of nursing? _____ Yes _____No

49. In your community or nearby are there attractive employment opportunities in nursing? _____ Yes _____ No

50. How long do you expect to stay in your present job?

_____ less than 1 year _____ 1-2 years _____ 2-4 years _____ 5 or more

51. Have you looked for other employment opportunities within the past year? _____ Yes _____ No
If yes, in _____ nursing _____ non nursing or _____ both?

52. Beginning with yourself, list the ages (in years, if less than 1 enter 0) and circle the sex of the members of your household. M = Male F = Female

	AGE	SEX	AGE	SEX	AGE	SEX	AGE	SEX
yourself	_____	M F	_____	M F	_____	M F	_____	M F
	_____	M F	_____	M F	_____	M F	_____	M F
	_____	M F	_____	M F	_____	M F	_____	M F

53. Marital status: _____ married _____ single _____ widowed _____ separated _____ divorced

54. If currently married, spouses occupation? _____

55. Would it be easy for your spouse to find employment if you decided to relocate? _____ Yes _____ No

56. What is your personal annual income from nursing before taxes?

_____ $ 9,999 or less
_____ $10,000-$12,999
_____ $13,000-$15,999
_____ $16,000-$18,999
_____ $19,000-$21,999
_____ $22,000-$24,999
_____ $25,000-$27,999
_____ $28,000-$30,999
_____ $31,000 or above

57. What percentage of your family income does this represent? _____

more →

58. Please indicate the size of the community in which you were raised:

_____ rural (less than 2500)
_____ small town (2500-10,000)
_____ town (10,000-25,000)
_____ city (25,000-50,000)
_____ urban (50,000-100,000)
_____ metropolitan (over 100,000)

59. How long have you resided in the community where you currently live (estimate to the nearest year)?

_____

60. On a scale of 1 to 5 with 5 being highest, please rate your satisfaction with your community as a place to:

live	1	2	3	4	5
raise children	1	2	3	4	5
build a new home	1	2	3	4	5
invest your savings	1	2	3	4	5
start a new business	1	2	3	4	5
worship	1	2	3	4	5
provide ample social opportunities	1	2	3	4	5

61. Please indicate the size of the community in which you currently work:

_____ rural (less than 2500)
_____ small town (2500-10,000)
_____ town (10,000-25,000)
_____ city (25,000-50,000)

62. What factors led you to practice nursing in a rural area?

1. _____
2. _____
3. _____

63. Which factor played a greater role in influencing your decision to accept your present position?

_____ health care agency
_____ job availability
_____ community
_____ other (please specify) _____

64. What factors might cause you to leave your current position within the next 5 years?

1. _____
2. _____
3. _____

65. Any comments you wish to make concerning your job, rural nursing in general, or this study:

_____

_____

_____

_____

_____

_____

_____

Rural Nursing Job and Community Satisfaction Survey

A. Please indicate the region you work in: _____Northern Interior _____Skeena – Northwest

_____Peace – Liard _____Cariboo _____Upper Island – Central Coast _____Coast Garibaldi

_____Kootenay East _____Kootenay West/Boundary

B. How many PHNs work in your office (counting yourself)? _____

C. How many FTE's do you work? _____

The following statements have been expressed by nurses. Do you agree? Please respond by indicating strongly disagree (SD), disagree (D), neutral (N), agree (A), or strongly agree (SA). In addition, concepts presented in these statements contribute to job satisfaction. Please indicate how important each of these factors are to you very unimportant (1), unimportant (2), neutral (3), important (4), or very important (5).

	Please circle your response to the statement.					**Please circle the level of importance to you.**				
1. I have plenty of time to discuss PHN concerns with my colleagues.	SD	D	N	A	SA	1	2	3	4	5
2. I have little control over my work.	SD	D	N	A	SA	1	2	3	4	5
3. My immediate co-workers are competent.	SD	D	N	A	SA	1	2	3	4	5
4. This health unit offers opportunities for advancement/promotion.	SD	D	N	A	SA	1	2	3	4	5
5. In this health unit PHNs are expected to perform non-nursing tasks.	SD	D	N	A	SA	1	2	3	4	5
6. A great deal of independence is permitted if not required of me.	SD	D	N	A	SA	1	2	3	4	5
7. The PHN personnel in this health unit are not as friendly or supportive as I would like.	SD	D	N	A	SA	1	2	3	4	5
8. PHN-client ratios in this health unit are conducive to implement client/family/community services.	SD	D	N	A	SA	1	2	3	4	5
9. Too much paper work is required of PHN personnel in this health unit.	SD	D	N	A	SA	1	2	3	4	5
10. I am sometimes required to do things on my job that are against my better professional nursing judgment.	SD	D	N	A	SA	1	2	3	4	5
11. A good deal of networking is present between various levels of PHN personnel in this health unit.	SD	D	N	A	SA	1	2	3	4	5
12. The PHN administrators or seniors generally consult with PHN staff on daily problems and procedures.	SD	D	N	A	SA	1	2	3	4	5

	Please circle your response to the statement.					Please circle the level of importance to you.				
13. Based on feedback from PHNs in other health units, the pay at this health unit is fair.	SD	D	N	A	SA	1	2	3	4	5
14. I have too much responsibility and not enough authority.	SD	D	N	A	SA	1	2	3	4	5
15. New PHNs are not quickly made to feel at home in this health unit.	SD	D	N	A	SA	1	2	3	4	5
16. PHNs in this agency are encouraged to participate in continuing education.	SD	D	N	A	SA	1	2	3	4	5
17. Pay scales for PHN personnel need to be upgraded.	SD	D	N	A	SA	1	2	3	4	5
18. I am sometimes given more responsibility in decision making than I am prepared to handle.	SD	D	N	A	SA	1	2	3	4	5
19. PHN staff have sufficient control of the total number of hours worked.	SD	D	N	A	SA	1	2	3	4	5
20. Considering what is expected of PHN personnel at this health unit, the pay we receive is reasonable.	SD	D	N	A	SA	1	2	3	4	5
21. I have the support of my supervisor to make important decisions in my work.	SD	D	N	A	SA	1	2	3	4	5
22. A great gap exists between administration in this health unit and the daily problems of PHN service.	SD	D	N	A	SA	1	2	3	4	5
23. I have no doubt in my mind that what I do on my job is really important.	SD	D	N	A	SA	1	2	3	4	5
24. PHN staff have sufficient control in scheduling their own work hours in this health unit.	SD	D	N	A	SA	1	2	3	4	5
25. The types of activities required of me are reasonable.	SD	D	N	A	SA	1	2	3	4	5
26. I have all the voice in planning policy and procedures that I want.	SD	D	N	A	SA	1	2	3	4	5
27. I am frequently asked to work overtime.	SD	D	N	A	SA	1	2	3	4	5
28. The PHN personnel in this health unit do not hesitate to take the time to consult with me or support me when things get in a rush.	SD	D	N	A	SA	1	2	3	4	5
29. I am proud to talk to other people about what I do on my job.	SD	D	N	A	SA	1	2	3	4	5

	Please circle your response to the statement.					Please circle the level of importance to you.				
30. I wish the physicians here would show more respect for the knowledge/skill of the PHN staff.	SD	D	N	A	SA	1	2	3	4	5
31. I have sufficient input into implementing programs for the clients/families/communities.	SD	D	N	A	SA	1	2	3	4	5
32. This health unit financially rewards advanced training/education.	SD	D	N	A	SA	1	2	3	4	5
33. My earning potential in the health unit is reasonable.	SD	D	N	A	SA	1	2	3	4	5
34. I have sufficient time to accomplish my job responsibilities.	SD	D	N	A	SA	1	2	3	4	5
35. I work weekends.	SD	D	N	A	SA	1	2	3	4	5
36. I do not receive some benefits that are important to me.	SD	D	N	A	SA	1	2	3	4	5
37. If I had the decision to make all over again, I would still go into nursing and become a PHN.	SD	D	N	A	SA	1	2	3	4	5
38. Overall, I am very satisfied with my job.	SD	D	N	A	SA	1	2	3	4	5

39. Which benefits do you currently receive from this agency.	Please mark Yes or No		Please circle the level of importance to you.				
a) health insurance	_____Yes	_____No	1	2	3	4	5
b) retirement	_____Yes	_____No	1	2	3	4	5
c) day care (child/elder)	_____Yes	_____No	1	2	3	4	5
d) vacation/holidays	_____Yes	_____No	1	2	3	4	5
e) sick/maternity leave	_____Yes	_____No	1	2	3	4	5
f) tuition reimbursement	_____Yes	_____No	1	2	3	4	5
g) isolation allowance	_____Yes	_____No	1	2	3	4	5
h) health unit vehicle	_____Yes	_____No	1	2	3	4	5
i) cell/mobile phone	_____Yes	_____No	1	2	3	4	5
j) telephone conference with peers	_____Yes	_____No	1	2	3	4	5
k) inservices	_____Yes	_____No	1	2	3	4	5

40. What is your level of anonymity in your present community.	Low				High
	1	2	3	4	5

41. How satisfied are you with the following factors in your present community and how important are these factors to you?	Not satisfied				Very satisfied	Not important				Very important
a) level of anonymity	1	2	3	4	5	1	2	3	4	5
b) friendly	1	2	3	4	5	1	2	3	4	5
c) trusting	1	2	3	4	5	1	2	3	4	5
d) social/recreation opportunities	1	2	3	4	5	1	2	3	4	5
e) friends	1	2	3	4	5	1	2	3	4	5
f) place of worship	1	2	3	4	5	1	2	3	4	5
g) quality of schools (K-12)	1	2	3	4	5	1	2	3	4	5

How satisfied are you with the following factors in your present community and how important are these factors to you?	Not satisfied				Very satisfied	Not important				Very important
h) safety	1	2	3	4	5	1	2	3	4	5
i) overall environment for children	1	2	3	4	5	1	2	3	4	5
j) community's acceptance of spouse/partner	1	2	3	4	5	1	2	3	4	5
k) being asked work related questions outside of work	1	2	3	4	5	1	2	3	4	5
l) size of community	1	2	3	4	5	1	2	3	4	5
m) distance your community is away from a major centre.	1	2	3	4	5	1	2	3	4	5
n) your ability to stay current in your practice	1	2	3	4	5	1	2	3	4	5
o) local government	1	2	3	4	5	1	2	3	4	5
p) overall community satisfaction	1	2	3	4	5	1	2	3	4	5
42. If married/partnered, how satisfied is your spouse/partner, overall, with the community?	1	2	3	4	5	1	2	3	4	5

43. Do you ever feel isolated: a) socially ____Y ____N b) professionally ____Y ____N

c) geographically ____Y ____N

44. What is your educational background?

	Check all that apply:	Year degree received	Province or country degree received (e.g. Ontario)
a) Diploma	_____	_____	_____
b) Bachelors Degree in Nursing	_____	_____	_____
c) Bachelors Degree in Another Field	_____	_____	_____
d) Masters Degree in Nursing	_____	_____	_____
e) Masters Degree in Another Field	_____	_____	_____
f) Doctoral Degree in Nursing, or Another Field	_____	_____	_____

45. In what year and province were you first licensed to practice as a RN in Canada? year: _____ province: _____

46. List your professional job history **over the last 5 years** beginning with your present place of employment.

Length of employment (in years/months)	**Type of agency** (hospital, nursing home, clinic, home health, community, school, other)	**Province**	**Position** (staff nurse, Admin., Educ.)	**Full/Part Time**	**Primary reason for change**
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

47. What is the longest distance you must travel to deliver service? _____ Km (one way).

48. Have you been employed outside of nursing in your recent past? _____ Yes _____ No

49. In your community or nearby are there attractive employment opportunities outside of nursing? _____ Yes _____ No

50. In your community or nearby are there attractive employment opportunities in nursing? _____ Yes _____ No

51. How long do you expect to stay in your present job?

_____ less than 1 year _____ 1-2 years _____ 2-4 years _____ 5 or more years

52. Have you looked for other employment opportunities within the past year? _____ Yes _____ No

If yes, in _____ nursing _____ non-nursing or _____ both

53. Beginning with yourself, list the ages (in years, if less than 1 enter 0) and circle the sex of the members or your household. M = Male F = Female

	AGE	SEX	AGE	SEX	AGE	SEX	AGE	SEX
Yourself	____	M F	____	M F	____	M F	____	M F
	____	M F	____	M F	____	M F	____	M F
	____	M F	____	M F	____	M F	____	M F
	____	M F	____	M F	____	M F	____	M F

54. Marital status: _____ married/partnered _____ single _____ widowed _____ separated _____ divorced

55. If you are currently married or have a partner, what is his/her occupation? _____

56. Would it be easy for your spouse/partner to find employment if you decided to relocate? _____ Yes _____ No

57. Please estimate your annual income from nursing to the nearest $1,000. _____

58. What percentage of your family income does this represent? _____

59. How long have you resided in the community where you currently live (estimate to the nearest year)? _____

60.

Please circle the population ranges that best answer the following:	Rural <2.500	Small Town 2,500-4,999	Town 5-9,999	City 10-25,000	Urban 50-100,000
a) size of the community you were born in	1	2	3	4	5
b) if married, the size of the community your spouse/partner grew up in.	1	2	3	4	5
c) size of community you are currently living in	1	2	3	4	5
d) size of community in which you currently work	1	2	3	4	5

61. What factors led you to practice nursing in a rural area?

_____

_____

_____

62. Which factor played a greater role in influencing your decision to accept your present position?

_____ health care agency _____ community _____ other (please specify) _____

_____ job availability _____ partner employed in/near community

63. What are the main factors that are influencing you in **remaining** in your current position in this community?

64. What factors might cause you to **leave** your current position within the next 5 years?

65. Any comments you wish to make concerning your job, community, rural nursing in general, or this study:
(Feel free to add more paper if needed)

Thank you for your help!

Job satisfaction divided into components.

First column is original wording. **Second column** is the revision to reflect PHN terminology. All changes in wording are indicated in bold print.

Task Requirements

1. I have plenty of time to discuss nursing concerns with my colleagues.	1. I have plenty of time to discuss **PHN** concerns with my colleagues.
5. In this agency nurses are expected to perform non-nursing tasks.	5. In this **health unit PHN** are expected to perform non-nursing tasks.
9. Too much paper work is required of nursing personnel in this agency.	9. Too much paper work is required of **PHN** personnel in this health unit.
25. The types of activities required of me are reasonable.	25. The types of activities required of me are reasonable.
35. I have sufficient time to accomplish my job responsibilities.	35. I have sufficient time to accomplish my job responsibilities.

Organization Climate

8. Nurse-patient ratios in this agency are conducive to safe patient care.	8. **PHN-client ratios in this health unit are conducive to implement client/family/community services.**
12. The nursing administrators generally consult with staff on daily problems and procedures.	12. The **PHN administrators or Seniors** generally consult with **PHN** staff on daily problems and procedures.
19.Nursing staff have sufficient control of the total number of hours worked.	19. **PHN** staff have sufficient control of the total number of hours worked.
22. A great gap exists between administration in this agency and the daily problems of nursing service.	22. A great gap exists between administration in this health unit and the daily problems of **PHN** service.
24. Nursing staff have sufficient control in scheduling their own work shifts in this agency.	24. **PHN** staff have sufficient control in scheduling their own work hours in this health unit.
26. I have all the voice in planning policy and procedures that I want.	26. I have all the voice in planning and procedures that I want.

Professional Status

23. I have no doubt in my mind that what I do on my job is really important.	23. I have no doubt in my mind that what I do on my job is really important.
30. I am proud to talk to other people about what I do on my job.	30. I am proud to talk to other people about what I do on my job.
38. If I had the decision to make all over again, I would still go into nursing.	38. If I had the decision to make all over again I would still go into nursing **and PHN.**

Salary

13. Based on feedback from nurses in other agencies, the pay at this agency is fair.	13. Based on feedback from **PHN in other health units, the pay at this health unit is fair.**
17. Pay scales for nursing personnel need to be upgraded.	17. Pay scales for **PHN personnel** need to be upgraded.
20. Considering what is expected of nursing personnel at this agency, the pay we receive is reasonable.	20. Considering what is expected of **PHN personnel at this health unit**, the pay we receive is reasonable.
34. My earning potential in this agency is reasonable	34. My earning potential in this **health unit** is reasonable.

Autonomy

2. I have little control over my work.	2. I have little control over my work.
6. A great deal of independence is permitted if not required of me.	6. A great deal of independence is permitted if not required of me.
10. I am sometimes required to do things on my job that are against by better professional nursing judgement.	10. I am sometimes required to do things on my job that are against by better professional nursing judgement.
14. I have too much responsibility and not enough authority.	14. I have too much responsibility and not enough authority.
18. I am sometimes given more responsibility in decision making than I am prepared to handle.	18. I am sometimes given more responsibility in decision making than I am prepared to handle.
21. I have the support of my supervisor to make important decisions in my work.	21.I have the support of my supervisor to make important decisions in my work.
32. I have sufficient input into the program of care for the each of my patients.	32. I have sufficient input into **implementing programs for the clients/family/community.**

Interactions

3. My co-workers are competent.	3. My **immediate** co-workers are competent.
7. The nursing personnel in this agency are not as friendly and out going as I would like.	7. The **PHN personnel in this health unit** are not as friendly **or supportive** as I would like.
11. A good deal of teamwork is present between various levels of nursing personnel in this agency.	11. A good deal of networking is present between various levels of **PHN personnel in this health unit.**
15. New employees are not quickly made to feel at home in this agency.	15. **New PHN** are not quickly made to feel at home in **this health unit**.
28. The nursing personnel in this agency do not hesitate to pitch in and help one another when things get in a rush.	28. The **PHN personnel** in this **health unit** do not hesitate to **take the time to consult with me or support me** when things get in a rush.
31. I wish the physicians here would show more respect for the knowledge/skill of the nursing staff.	31.I wish the physicians here would show more respect for the knowledge/skill of the **PHN staff.**

Benefits and Rewards

4. This agency offers opportunities for advancement/promotion.	4. This **health unit** offers opportunities for advancement/promotion.
16.Nurses in this agency are encouraged to participate in continuing education.	16. **PHN** in this health unit are encouraged to participate in continuing education.
27. I am frequently asked to work overtime.	27. I am frequently asked to work overtime.
33. This agency financially rewards advanced training/education.	33. This **health unit** financially rewards advanced training/education.
36. I work weekends.	36. I work weekends.
37. I do not receive some benefits that are important to me.	37. I do not receive some benefits that are important to me.

Stamps and Piedmonte 1986	University North Dakota 1992-1994	Stamps 1997
1. My present salary is satisfactory.	34. My earning potential in this agency is reasonable.	1.My present salary is satisfactory.
2. Most people do not sufficiently appreciate the importance of nursing care to hospital patients.		9. Most people appreciate the importance of nursing care to hospital patients.
3. The nursing personnel on my service don't hesitate to pitch in and help one another out when things get in a rush.	29. The nursing personnel in this agency do not hesitate to pitch in and help one another when things get in a rush.	**3. The nursing personnel on my service pitch in and help one another out when things get in a rush.**
4. There is too much clerical and "paperwork' required of nursing personnel in this hospital.	10. Too much paper work is required of nursing personnel in this agency.	4. There is too much clerical and "paperwork" required of nursing personnel in this hospital.
5.The nursing staff has sufficient control over scheduling their own work shifts in my hospital.	25. Nursing staff have sufficient control in scheduling their own work shifts in this agency.	5. The nursing staff has sufficient control over scheduling their own shifts in my hospital.
6. Physicians in general cooperate with the nursing staff on my unit.		6. Physicians in general cooperate with nursing staff on my unit.
7. I feel that I am supervised more closely than is necessary.		7. I feel that I am supervised more closely than is necessary.
8. Excluding myself, it is my impression that a lot of nursing personnel at this hospital are dissatisfied with their pay.		8. It is my impression that a lot of nursing personnel at this hospital are dissatisfied with their pay.
9. Nursing is along way from being recognized as a profession.		2. Nursing is not widely recognized as being an important profession.
10. New employees are not quickly made to "feel at home" on my unit.	16. New employees are not quickly made to feel at home in this agency.	**10. It is hard for new nurses to feel "at home" in my unit.**
11. I think I could do a better job if I didn't have so much to do all the time.		15. I think I could do a better job if I did not have so much to do all the time.
12. There is a great gap between the administration of this hospital and the daily problems of the nursing service.	23. A great gap exists between administration in this agency and the daily problems of nursing service.	12. There is a great gap between the administration of this hospital and the daily problems of the nursing service.
13. I feel I have sufficient input into the program of care for each of my patients.	32. I have sufficient input into the program of care for each of my patients.	13. I feel I have sufficient input into the program of care for each of my patients.
14. Considering what is expected of nursing service personnel at this hospital, the pay we get is reasonable.	21. Considering what is expected of nursing personnel at this agency, the pay we receive is reasonable.	14. Considering what is expected of nursing service personnel at this hospital, the pay we get is reasonable.
15. There is no doubt whatever in my mind that what I do on my job is really important.	24. I have no doubt in my mind that what I do on my job is really important.	11. There is no doubt whatever in my mind that what I do on my job is really important.

16. There is a good deal of teamwork and cooperation between various levels of nursing personnel on my service.	**12**. A good deal of teamwork is present between various levels of nursing personnel in this agency.	**16**. There is a good deal of teamwork and cooperation between various levels of nursing personnel on my service.
17. I have too much responsibility and not enough authority.	**15**. I have too much responsibility and not enough authority.	**17**. I have too much responsibility and not enough authority.
18. There are not enough opportunities for advancement of nursing personnel at this hospital.	**4**. This agency offers opportunities for advancement/promotion.	**18**. There are not enough opportunities for advancement of nursing personnel at this hospital.
19. There is a lot of teamwork between nurses and doctors on my own unit.		**19**. There is a lot of teamwork between nurses and doctors on my own unit.
20. On my service, my supervisors make all the decisions. I have little direct control over my own work.	**2**. I have little control over my work.	**20**. On my service my supervisors make all the decisions. I have little direct control over my own work.
21. The present rate of increase in pay for nursing service personnel at this hospital is not satisfactory.		**21**. The present rate of increase in pay for nursing service personnel at this hospital is not satisfactory.
22. I am satisfied with the types of activities that I do on my job.	**26**. The types of activities required of me are reasonable.	**22**. I am satisfied with the types of activities that I do on my job.
23. The nursing personnel on my service are not as friendly and outgoing as I would like.	**7**. The nursing personnel in this agency are not as friendly and outgoing as I would like.	**23**. The nursing personnel on my service are not as friendly and outgoing as I would like.
24. I have plenty of time and opportunity to discuss patient care problems with other nursing service personnel.	**1**. I have plenty of time to discuss nursing concerns with my colleagues.	**24**. I have plenty of time and opportunity to discuss patient care problems with other nursing service personnel.
25. There is ample opportunity for nursing staff to participate in the administrative decision-making process.		**25**. There is ample opportunity for nursing staff to participate in the administrative decision-making process.
26. A great deal of independence is permitted if not required of me.	**6**. A great deal of independence is permitted if not required of me.	**26**. A great deal of independence is permitted, if not required, of me.
27. What I do on my job doesn't add up to anything really significant.	**22**. I have no doubt in my mind that what I do on my job is really important.	**27**. What I do on my job does not add up to anything really significant.
28. There is a lot of "rank consciousness" on my unit, with nursing personnel seldom mingling with others of lower ranks.		**28**. There is a lot of "rank consciousness" on my unit: nurses seldom mingle with those with less experience or different types of educational preparation.
29. I have sufficient time for direct patient care.	**35**. I have sufficient time to accomplish my job responsibilities.	**29**. I have sufficient time for direct patient care.
30. I am sometimes frustrated because all of my activities seem programmed for me.		**30** I am sometimes frustrated because all of my activities seem programmed for me.
31. I am sometimes required	**11**. I am sometimes required	**31**. I am sometimes required

to do things on my job that are against my better professional nursing judgement.	to do things on my job that are against my better professional nursing judgement.	to do things on my job that are against my better professional nursing judgment.
32. From what I hear from and about nursing service personnel at other hospitals, we at this hospital are being fairly paid.	14. Based on feedback from nurses in other agencies, the pay at this agency is fair.	**32. From what I hear about nursing service personnel at other hospitals, we at this hospital are being fairly paid.**
33. Administrative decisions at this hospital interfere too much with the patient care.		33. Administrative decisions at this hospital interfere too much with patient care.
34. It makes me proud to talk to other people about what I do on my job.	30. I am proud to talk to other people about what I do on my job.	34. It makes me proud to talk to other people about what I do on my job.
35. I wish the physicians here would show more respect for the skill and knowledge of the nursing staff.	31. I wish the physicians here would show more respect for the knowledge/skill of the nursing staff.	35. I wish the physicians here would show more respect for the skill and knowledge of the nursing staff.
36. I could deliver much better care if I had more time with each patient.	8. Nurse-patient ratios in this agency are conducive to safe patient care.	36. I could deliver much better care if I had more time with each patient.
37. Physicians at this hospital generally understand and appreciate what the nursing staff does.		37. Physicians at this hospital generally understand and appreciate what the nursing staff does.
38. If I had the decision to make all over again, I would still go into nursing.	38. If I had the decision to make all over again, I would still go into nursing.	38. If I had the decision to make all over again, I would still go into nursing.
39. The physicians at this hospital look down too much on the nursing staff.		39. The physicians at this hospital look down too much on the nursing staff.
40. I have all the voice in planning and procedures for this hospital and my unit that I want.	27. I have all the voice in planning policy and procedures that I want.	**40. I have all the voice in planning policies and procedures for this hospital and my unit that I want.**
41. My particular job really doesn't require much skill or "know-how".		41. My particular job really doesn't require much skill or "know-how".
42. The nursing administrators generally consult with the staff on daily problems and procedures.	13. The nursing administrators generally consult with staff on daily problems and procedures.	42. The nursing administrators generally consult with the staff on daily problems and procedures.
43. I have the freedom in my work to make important decisions as I see fit, and can count on my supervisor to back me up.		43. I have the freedom in my work to make important decisions as I see fit, and can count on my supervisors to back me up.
44. An upgrading of pay schedules for nursing personnel is needed at this hospital.	18. Pay scales for nursing personnel need to be upgraded.	44. An upgrading of pay schedules for nursing personnel is needed at this hospital.
	20 Nursing staff have sufficient control of the total number of hours worked.	
	3. My co-workers are competent.	

	5. In this agency nurses are expected to perform non-nursing tasks. **9**. Which benefits do you currently receive from this agency: a) health insurance b) retirement c) day care (child/elder) d) vacation/holidays e) sick/maternity leave f) tuition **17**. Nurses in this agency are encouraged to participate in continuing education. **28**. I am frequently asked to work overtime. **33**. This agency financially rewards advanced training/education. **36**. I work weekends. **37**. I do not receive some benefits that are important to me. **39**. Overall, I am very satisfied with my job.

Question: If Stamps 1997 was available when UND was devising their questionnaire would it have influenced the final product, i.e. the UND questionnaire?

It is my opinion Stamps 1997 would not have changed the formulation of the UND questionnaire because:
There is little changed from Stamps and Piedmonte 1986 to Stamps 1997 basically question order e.g. question 9 became question 2.
Some negatively expressed questions were changed to the positive or vice versa, e.g. Most people do not sufficiently appreciate the importance of nursing care to hospital patients (old), to Most people appreciate the importance of nursing care to hospital patients (new). However UND did not use this question.
UND used or modified 28 of Stamps and Piedmonte 1986 questions of these 28 only 4 were changed in the Stamps 1997. These 4 questions have been highlighted entirely in bold print for ease of referencing.

Ten questions are unique to UND questionnaire when assessing job satisfaction. These are listed at the bottom of column comparing UND. Most of these questions refer to benefits and rewards which is not explored by Stamps in either version.

Since my research is based on research by UND it is important for me to keep the UND questionnaire so that I can do a comparison of my findings to the similar study done by Dunkin, et al. 1992.

Also, UND is a more comprehensive study because it is attempting to assess job satisfaction and community satisfaction. Any version of Stamps is only assessing job satisfaction.
From personal knowledge the shorter the questionnaire and ease of completing it, circle or tic marks, the better the chance of having the questionnaire returned. UND is user friendly plus it

allows me to explore community satisfaction. Time of filling out the questionnaire remains around 30 minutes.
UND has modified wording to be used by nurses in community health. Stamps and Piedmonte 1986 or Stamps 1997 has the wording geared towards hospital nurses. This can be "off-putting" for a community nurse who has to fill out a questionnaire obviously devised for hospital nurses. This was a loudly voiced frustration of my colleagues when we went through our classification process with the amalgamation of the various branches of BCNU.

Finally, Stamps (1997) in reviewing Dunkin, Stratton, (1994) which uses the same questionnaire as Dunkin et al, (1992) considers the UND questionnaire as a shortened version of Stamps IWS. Stamps (1997) comments on UND's use of the 5 point Likert scale stating "The correlation with responses to that item and overall score on the IWS was greater than .80, reinforcing the structural integrity of the IWS" (p.279).

Appendix C

Letters of Verification and Permission to Survey
Chart of Health Units

date
Health Unit Address

Dear

I am a public health nurse and a graduate student at the University of Northern British Columbia in the Community Health Program. The purpose of my research is to investigate the influence of job and community satisfaction on the retention of public health nurses in rural British Columbia. Public health nurses make a significant contribution to health care delivery in rural communities. The findings of this study may have future use by you and the health authorities in retaining public health nurses in rural areas.

This letter has two purposes. The first purpose is to ask your permission to survey the public health nurses in your health region. This mailed survey questionnaire would take place by the first of December.

The second purpose is to ask you to verify the location of each office, the numbers of public health nurses and the vacant positions in your health region. To facilitate this I have enclosed a chart with the offices for your area listed. Would you please enter the information and make any necessary corrections to the list of offices? Please return by email mbbetkus@mcbridebc.net or by faxing (250) 569-2355.

I would like to thank you for your support and cooperation in my study. If you have any questions please contact me at (250) 569-3202 evenings (collect). For more information, you may also contact Martha MacLeod, Ph.D., RN, Chair of the thesis committee at (250) 960-6507, Nursing Program, University of Northern British Columbia. If you have any complaints about this study please contact the Office of Research and Graduate Studies, UNBC at (250) 960- 5820.

Sincerely,

Mary Henderson Betkus, RN, BScN
MSc Student Community Health

As senior manager responsible for public health nurses for (West) Kootenay/Boundary Health Unit Region, do you give permission to Mary Henderson Betkus to survey the public health nurses by mailed survey questionnaire? YES _____
NO _____

YOUR NAME _____

This questionnaire will take place by the first of December.

Please fill in the **total** number of public health nurses working in the **specific office** regardless of whether they are full time or part time. Also note if there are any vacant public health nursing positions for each office. Indicate if the office is covered by a public health nurse from another office and which office. Please review the populations and addresses and correct if necessary. PLEASE RETURN TO FAX 250-569-2355 OR EMAIL TO mbbetkus@mcbridebc.net

EXAMPLE:

Office	# of PHNs working and # of vacant PHN positions	Population	Address
*Fort St. James	2 PHN 0 vacancies	Village 2,046 Bulkley-Nechako Subd.A 6,891	Box 1257, V0J 1P0

West Kootenay-Boundary Health Unit Region #2.

Office	# of PHNs working and # of vacant PHN positions	Population	Address
*Castlegar		City 7,027 RD 8,031	CKHU 813-10th St., V1N 2H7
*Fruitvale		Village 2,117	CKHU Box 10, 1947 Beaver St., V0G 1L0
*Grand Forks		City 3,994	CKHU Box 25, 7343-4th St., V0H 1H0
*Greenwood		City 784 RD 15,354	CKHU Box 167, 255 S. Government St. V0H 1J0
*Kaslo		Village 1,063	CKHU Box 309, 4th St. V0G 1M0
*Nakusp		Village 1,736 RD 8,031	CKHU Box 315, 611 Broadway St. V0G 1R0
*Nelson		City 9,585	CKHU 333 Victoria St. 2nd Floor, V1L 4K3
*Trail		City 7,696 RD 3,968	CKHU 1051 Farwell St. V1R 4S9

Thank You

Appendix D

Letters
For clarification of wording of the modified questionnaire.
For Consent to Participant
First Follow-up letter
Second Follow-up letter
For Individual Opening Mail

(Date)

Name
Director of Public Health
Address

Dear

I am a graduate student at the University of Northern British Columbia in the Community Health Program. My thesis is to identify and examine the factors that public health nurses find satisfying about their nursing practice and their rural community and the effect of this on retention in rural British Columbia.

I am seeking your help in previewing my questionnaire for clarity of wording before it is sent to rural public health nurses. You have been chosen because you manage a health unit that provides service for a rural health region that serves small towns with rural populations and remote communities. Your knowledge of rural public health nursing makes your input valuable and will help to ensure that all questions will be understood.

Previewing the questionnaire will take about 30 minutes. Any changes may be written on the questionnaire. Will you fax the questionnaire with your comments back to me at 250-569-2232?

If you have any questions please contact me at (250) 569-3202 evenings (collect). For more information, you may also contact Martha MacLeod, Ph.D., RN, Chair of the thesis committee at (250) 960-6507, School of Nursing, University of Northern British Columbia. If you have any complaints about this study please contact the Office of Research and Graduate Studies, UNBC at (250) 960-5555.

Sincerely,

Mary Henderson Betkus, RN, BScN
MSc Student Community Health

November 30, 2000.

Dear Colleague,

I am a public health nurse and a graduate student at the University of Northern British Columbia in the Community Health Program. The purpose of my research is to investigate the influence of job and community satisfaction on the retention of public health nurses in rural communities of British Columbia. You have been chosen to receive this questionnaire because you provide service for a rural health region that serves small towns with rural populations and remote communities. As public health nurses we make a significant contribution to health care delivery in our communities. The findings of this study may have future use by health authorities in retaining public health nurses in rural areas.

The questionnaire will take approximately 20 minutes to complete. Your responses will be anonymous. Confidentiality will be maintained by not identifying any individual responses. All data will be grouped. Only the researcher and the supervisors will have access to the individual responses. The questionnaire will be kept in a secure place during the progress of the research and will be destroyed at the completion of the study. The questionnaires are removed from the envelopes and the envelopes are destroyed before the questionnaire is given to the researcher.

For the results to be useful I need as many questionnaires returned as possible. **Please return** the questionnaire in the enclosed stamped addressed envelope by **December 15, 2000**. Thank you in advance for taking time in your busy schedule to complete this questionnaire and supporting this important research.

By returning the completed questionnaire it will be assumed that you are consenting to participate in the study. You are under no obligation to participate and you have the right to withdraw at any time.

Executive summaries will be mailed to each public health nursing manager of all participating health regions. A personal copy of the summary will be sent directly to you by requesting it by emailing mbbetkus@mcbridebc.net.

If you have any questions please contact me at (250) 569-3202 evenings (collect). For more information, you may also contact Martha MacLeod, Ph.D., RN, Chair of the thesis committee at (250) 960-6507, Nursing Program, University of Northern British Columbia. If you have any complaints about this

study please contact the Office of Research and Graduate Studies, UNBC at (250) 960- 5820.

Sincerely,

Mary Henderson Betkus

Mary Henderson Betkus, RN, BScN,
MSc Student Community Health

December 18, 2000

Dear Colleague,

Two weeks ago you received a questionnaire from me. If you have already returned it **thank you** for your support in my research. If you have **not** returned the questionnaire **would you return it at your earliest convenience**?

I am a public health nurse and a graduate student at the University of Northern British Columbia in the Community Health Program. The purpose of my research is to investigate the influence of job and community satisfaction on the retention of public health nurses in rural communities of British Columbia. You have been chosen to receive this questionnaire because you provide service for a rural health region that serves small towns with rural populations and remote communities. As public health nurses we make a significant contribution to health care delivery in our communities. The findings of this study may have future use by health authorities in retaining public health nurses in rural areas.

The questionnaire will take approximately 20 minutes to complete. Your responses will be anonymous. Confidentiality will be maintained by not identifying any individual responses. All data will be grouped. Only the researcher and the supervisors will have access to the individual responses. The questionnaire will be kept in a secure place during the progress of the research and will be destroyed at the completion of the study. The questionnaires are removed from the envelopes and the envelopes are destroyed before the questionnaire is given to the researcher.

For the results to be useful I need as many questionnaires returned as possible. Please return the questionnaire in the enclosed stamped addressed envelope at your earliest convenience. Thank you in advance for taking time in your busy schedule to complete this questionnaire and supporting this important research.

By returning the completed questionnaire it will be assumed that you are consenting to participate in the study. You are under no obligation to participate and you have the right to withdraw at any time.

Executive summaries will be mailed to each public health nursing manager of all participating health regions. A personal copy of the summary will be sent directly to you by requesting it by emailing mbbetkus@mcbridebc.net.

If you have any questions please contact me at (250) 569-3202 evenings (collect). For more information, you may also contact Martha MacLeod, Ph.D.,

RN, Chair of the thesis committee at (250) 960-6507, Nursing Program, University of Northern British Columbia. If you have any complaints about this study please contact the Office of Research and Graduate Studies, UNBC at (250) 960- 5820.

Sincerely,

Mary Henderson Betkus

Mary Henderson Betkus, RN, BScN,
MSc Student Community Health

January 3, 2001

Dear Colleague,

Four weeks ago you received a questionnaire from me. If you have already returned it **thank you** for your support in my research. If you have **not** returned the questionnaire **would you return it at your earliest convenience**?

I am a public health nurse and a graduate student at the University of Northern British Columbia in the Community Health Program. The purpose of my research is to investigate the influence of job and community satisfaction on the retention of public health nurses in rural communities of British Columbia. You have been chosen to receive this questionnaire because you provide service for a rural health region that serves small towns with rural populations and remote communities. As public health nurses we make a significant contribution to health care delivery in our communities. The findings of this study may have future use by health authorities in retaining public health nurses in rural areas.

The questionnaire will take approximately 20 minutes to complete. Your responses will be anonymous. Confidentiality will be maintained by not identifying any individual responses. All data will be grouped. Only the researcher and the supervisors will have access to the individual responses. The questionnaire will be kept in a secure place during the progress of the research and will be destroyed at the completion of the study. The questionnaires are removed from the envelopes and the envelopes are destroyed before the questionnaire is given to the researcher.

For the results to be useful I need as many questionnaires returned as possible. Please return the questionnaire in the enclosed stamped addressed envelope at your earliest convenience. Thank you in advance for taking time in your busy schedule to complete this questionnaire and supporting this important research.

By returning the completed questionnaire it will be assumed that you are consenting to participate in the study. You are under no obligation to participate and you have the right to withdraw at any time.

Executive summaries will be mailed to each public health nursing manager of all participating health regions. A personal copy of the summary will be sent directly to you by requesting it by emailing mbbetkus@mcbridebc.net.

If you have any questions please contact me at (250) 569-3202 evenings (collect). For more information, you may also contact Martha MacLeod, Ph.D.,

RN, Chair of the thesis committee at (250) 960-6507, Nursing Program, University of Northern British Columbia. If you have any complaints about this study please contact the Office of Research and Graduate Studies, UNBC at (250) 960- 5820.

Sincerely,

Mary Henderson Betkus, RN, BScN,
MSc Student Community Health

2000-11-30

To who ever opens the mail:

I have received permission to survey public health nurses from the senior public health nursing manager for your health region. The manager has confirmed the number of public health nurses in your office.

Would you please give each public health nurse in your office a questionnaire to be completed and the attached stamped self addressed envelope?

Thank you for your cooperation.

Sincerely,

Mary Henderson Betkus, RN, BScN

Public Health Nurse