Retaining Public Health Nurses in Rural British Columbia

The Influence of Job and Community Satisfaction

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ABSTRACT

Background: Although the need to retain rural registered nurses is pressing, little is known about what influences them to stay in their current employment. The objectives of the study were: to examine public health nurses' (PHNs) job and community satisfaction; to relate job and community satisfaction to their decision to stay in their current employment in rural British Columbia.

Methods: A survey was mailed to all front-line PHNs in 48 rural and small urban communities in British Columbia. Of the 164 eligible PHNs, 124 responded (76% response rate).

Results: PHNs were most satisfied with their professional status, professional interaction and autonomy, their communities' acceptance of their partners, friendliness of the community and their friends. They were least satisfied with their salary. Job satisfaction or community satisfaction was not found to influence retention. Instead, "filter factors" such as age, retirement, family needs and the economy affected PHNs' intent to stay or leave.

Conclusion: If PHNs are to be retained in rural areas, their economic and family life situations merit greater attention, as does their experience of living and working in rural communities.

La traduction du résumé se trouve à la fin de l'article.

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The nursing shortage in Canada is expected to become more severe in the next decade.¹ Already, the number of rural RNs per 10,000 population has decreased from 65.2 in 1994 to 62.3 in 2000 in Canada, and from 54.6 to 51.7 in British Columbia.² This decline, coupled with an aging workforce and an increasing proportion of rural nurses employed in community health,² makes the retention of rural public health nurses (PHNs) of concern.

Recent research has found the retention of nurses to be related to job satisfaction and the quality of the nursing practice environments and work life. Most of this research has been urban and hospital-based, focused on factors within the work environment.³⁻⁶ In contrast, of direct concern to the retention of rural professionals is satisfaction with their communities, and the effect of rural living on their families and professional practice.⁷⁻¹¹

Canadian, U.S. and Australian studies have found access to continuing education, professional autonomy, scope of practice, and community safety, to affect professionals' choices to stay in or leave rural communities.⁹⁻¹⁴ Although some U.S. research specifically addresses PHNs, the retention of Canadian rural PHNs has not been studied. This research addresses the questions:

- 1) What job components and community aspects do public health nurses in rural British Columbia identify as satisfying?
- 2) What is the relationship between job satisfaction, community satisfaction and public health nurses' decisions to stay in their current jobs in rural British Columbia?

Definitions are noted in Table I.

METHODS

A self-administered questionnaire, with two mailed follow-ups,²¹ was sent in November 2000 to all 164 health authority-employed PHNs, who provide client level services through public health offices in 48 rural and small urban communities of the eight former rural health regions in British Columbia. The University of Northern British Columbia Research Ethics Committee provided ethical approval.

Instrument

The questionnaire was a modification of the University of North Dakota Rural Health Center questionnaire¹² which was based on Stamps and Piedmonte's Work Satisfaction Index (WSI).^{22,23} The questionnaire contains three sections: job satisfaction, community satisfaction, and narrative comments.

Job satisfaction was measured by a 37-item scale, which questioned satisfaction with task requirements, salary, autonomy, professional status, professional interaction, organizational climate, benefits and rewards, and overall job satisfaction. Previous research reported Cronbach's alpha coefficients of .88 to .89 for the scale,^{8,12,24} we found a Cronbach's alpha of .83. Community satisfaction was addressed by a 12-item scale (Cronbach's alpha .84) that was created by the first author from personal experience in a small community and pertinent literature.^{10-12,25,26} Both community and job satisfaction responses were provided on 5-point Likert scales (5 = Strongly Agree, 4 = Agree, 3 = Neutral, 2 = Disagree, 1 = Strongly Disagree). Differences were assessed through an independent *t*-test for group comparisons at alpha level 0.01 for multiple-item questions, and 0.05 for single-item questions. PHNs were also asked to rate, on a scale of 1 (Low) to 5 (High), their level of anonymity in their community.

Narrative data were provided through responses to open-ended questions about what would influence their remaining in or leaving their current position. Comments ranged from point-form to full paragraphs, and extra pages stapled to two of the questionnaires. The responses were analyzed for content, coded, and then combined into themes.^{27,28} The analysis was discussed by

TABLE I

Definitions

Rural health regions:	Those eight regions of British Columbia (Figure 1) named by the Rural and Northern Task Force in 1995, as rural health regions. ^{15,16} In December 2001, these regions were absorbed into four of the province's six health authorities. ¹⁷
Rural:	Communities outside the commuting zone of larger urban centres with populations of 10,000 or more. ¹⁸
Small urban:	Communities with populations of 10,000 to 55,000 in the eight rural regions of British Columbia.
Public Health Nurses:	Registered Nurses who promote and preserve the health of populations, usually through strategies of case management, health promotion, health education, disease prevention and health protection. ^{19,20}
Retention:	The intent of nurses currently employed as PHNs to stay in their current jobs for 5 years or longer. ¹²
Filter factors:	Reasons given by PHNs, in response to open-ended questions, for staying in or planning to leave their communities. These factors appear to act as a filter to retention, regardless of the PHNs' job and community satisfaction scores.

TABLE II

Job Satisfaction Scores of Public Health Nurses

Component	M	SD	n
Professional status	4.10	0.76	122
Interactions	3.66	0.61	120
Autonomy	3.65	0.54	120
Benefits and rewards	3.21	0.56	117
Organizational climate	3.09	0.66	119
Task requirements	2.84	0.66	122
Salary	2.17	0.74	120
Question overall job satisfaction	3.80	0.95	122
Overall job satisfaction scale	3.33	0.47	109

both authors and validated by external reviewers.

Respondents

The respondents were obtained through 48 of the 50 public health nursing offices in the eight rural regions. Thirty-seven of the 38 rural offices were included in the study. The one-person office of the first author was excluded. There were 1-7 PHNs per rural office, for a total of 89 PHNs. Eleven offices in small urban communities had 4-12 PHNs each, for a total of 75 PHNs. Prince George, the twelfth urban office, was excluded because of its significantly larger community size (75,000) and number of PHNs (31).

RESULTS

Of the 124 respondents (76% response rate), 68 were from rural communities, and 56 were from small urban communities. Respondent characteristics and response rates between rural and small urban communities were similar. The PHNs were predominantly female (99%) and married (90%). Their mean age was 43 years, with 67% 40 years and older; 60% were first licensed 20 years ago or more. This compares to the mean age of all BC RNs (44.4 years).² The top three occupations of the nurses' spouses were professional (23%), forestry and related (17%), and trade (15%). Half of the PHN respondents (49%) were employed in part-time permanent positions, 48% in full-time permanent posi-

TABLE III

Community Satisfaction Scores of Public Health Nurses

Item	All			Rural			Small Urban		
	M	SD	n	M	SD	n	M	SD	n
Friendly	3.88	0.78	121	3.95	0.74	65	3.79	0.83	56
Friends	3.82	1.02	121	3.85	0.99	65	3.79	1.07	56
Trusting	3.68	0.89	121	3.80	0.81	65	3.54	0.95	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	0.82	115	3.73	0.74	59	3.48	0.89	56
Quality of schools (K-12)	3.35	1.05	117	3.27	1.13	64	3.45	0.95	53
Being asked work-related questions outside of work	3.25	0.98	112	3.00	1.01	58	3.52	0.89	54*
Level of anonymity	3.22	1.15	120	3.17	1.28	66	3.28	0.98	54
Your ability to stay current in your practice	3.14	1.14	114	3.07	1.18	60	3.22	1.09	54
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	0.78	112	3.81	0.71	59	3.64	0.86	53
Overall community satisfaction scale	3.50	0.60	103	3.46	0.56	56	3.56	0.64	47

* $p < 0.002$

TABLE IV

Factors Influencing PHNs to Consider Staying or Leaving*

Factors	Sample Comments
Demographics Factors related to age, marital status, place of education, etc.	<ul style="list-style-type: none"> • Last 5 years before retirement are most important to be able to get anything for pension especially when I only work part time • Marriage • My husband's job brought us from Ontario
Personal circumstances Factors that nurses have some control over	<ul style="list-style-type: none"> • Have a mortgage to pay and few opportunities to get out of nursing into other areas • Real estate not selling and I am not prepared to move and have the house sell for less • Parents reside here and smaller community seems safer place to raise children, particularly as a single parent • Returning to school to pursue further study • Relocate closer to family • Relocate to give children better access to post basic education, health care, employment for spouse • Would never go back to hospital nursing due to staff shortages and shift work • Retirement • Too close to retirement to move
Opportunities Factors beyond the nurses' control other than choosing to accept or decline what is offered	<ul style="list-style-type: none"> • Unable to transfer within province as previously [due to new] provincial government contract [and no portability of benefits] • Husband's job relocation/Husband retiring • Partner unable to find work • No other job available closer or in my home community • Win the lottery

* N=122

Figure 1. Rural health regions surveyed in British Columbia¹⁶

tions. Seventy-seven percent of PHNs had lived in their present community for 5 years or more, and 50% of PHNs had already worked 5 years

or longer in public health nursing. Forty-three percent of those 35 years or under ($n = 29$) had been in their community less than 5 years.

Job satisfaction

While the PHNs were satisfied overall with their jobs, they indicated most satisfaction with their professional status, professional interactions, and autonomy, and least satisfaction with salary. As no significant differences were found between rural and small urban PHN job satisfaction scores, the overall scores are presented (Table II).

The neutral organizational climate score (3.09) and mixed narrative comments suggest that PHNs had varied perceptions of their organizational environment. The finding of professional status, professional interaction and autonomy as the three most satisfying aspects of their practice is, however, consistent with other studies of rural and urban public health nurses.^{12,29-35} The results did not support a correlation between age and job satisfaction ($r=0.041$, $p>0.05$), contrary to the findings of other studies.^{29,36}

Community satisfaction

Community satisfaction scores are shown in Table III. Community aspects that were considered to be most satisfying were friendly community, friends, trusting, and size of community. Least satisfying community aspects were distance from a major centre and ability to stay current in practice. Overall, 63% were satisfied to very satisfied with their community.

Rural and small urban PHNs were not significantly different in their community satisfaction, with one exception. Rural PHNs were less satisfied than were PHNs in small urban communities about being asked work-related questions outside of work ($t = -3.14$, $df = 110$, $p<0.002$, Cohen's d effect .57). There was no difference between rural and small urban PHNs in their satisfaction with perceived level of anonymity, but 74% of rural PHNs reported low anonymity compared to 57% of the small urban PHNs ($t = -2.47$, $df = 118$, $p<0.02$, Cohen's d effect .44). Being easily recognized in the rural community does not seem to be of concern but being asked work-related questions, a by-product of lack of anonymity, is an issue.

Influence of job and community satisfaction on retention

Overall, 52% of the PHNs indicated their intent to stay in their position for 5 years or more; 20% indicated plans to stay

2-4 years. However 28% of all PHNs, including 43% of those aged 35 years or younger, planned to leave in 2 or less years. No clear relationships were found between job satisfaction and retention or between community satisfaction and retention, however job and community satisfaction were correlated ($r = .48$, $p < 0.01$ medium effect size).

Written comments from 98% of the respondents helped with understanding why PHNs would stay or leave their positions. Many comments echoed and supported the elements of the job and community satisfaction scales. In addition, factors related to demographics, personal circumstances and opportunities beyond the nurses' control emerged (Table IV).

The researchers named these factors "filter factors", as they acted as a filter to retention, regardless of the PHNs' job and community satisfaction scores. For example, the closure of the local school or a pulp mill could require a move even though the PHN was satisfied with her job and the community.

DISCUSSION

In summary, the PHNs in rural areas of BC are moderately satisfied with their jobs and communities, but this satisfaction is not strongly related to their intent to stay in their present position (retention). Demographic factors, personal circumstances and opportunities, all additional reasons for staying in or leaving their communities, influence retention for these PHNs. The narrative comments reveal some of the complexity of retention for these nurses. While satisfaction with the job and with the community may be important, these other reasons appear to act as a filter to retention (Figure 2).

Filter factors can either promote or limit retention. The foremost demographic issue is the fact that most PHNs in rural areas are female and married. Many are in the communities because of their partners' employment. A change in spouses' or partners' employment through retirement can affect the PHNs' intentions to stay or leave. An older partner's retirement may enhance retention because of the PHN's wish to continue working. At the same time, a partner's retirement may prompt the PHN to retire early.

Figure 2. The effect of filter factors on retention.

PHNs' personal circumstances involve financial need, need for medical and health services, family commitments and the nurses' perceived need for professional growth. All these factors can contribute in some situations to PHNs staying in their communities and jobs, and in others to prompting the PHNs to seek employment or schooling for themselves and their children elsewhere. Opportunities for employment for the PHNs' spouses can be affected by a down turn in the economy. In some instances, this means that the PHNs will stay in the community as the sole income earner. In other cases, the family leaves the community. The retention of rural PHNs may be linked more strongly to local employment conditions for nurses' spouses or partners than to the PHNs' job or community satisfaction. Consequently, for PHNs in rural areas, job satisfaction occurs within the context of their community lives.

This research has identified the difficulties with the concept of anonymity. The narrative comments varied. For example, one person indicated that there was a lack of anonymity, but it was not problematic: "lots of people know me, I like it, or rather I am not bothered by it". Others expressed more difficulty with it. Consistent with a Saskatchewan study,³⁴ a lack of anonymity

did not appear to be an issue for rural PHNs. The issue of concern is the side effect of low anonymity and familiarity, that is, being consulted about work-related concerns outside work hours. Although 27% of rural PHNs were dissatisfied with this aspect of the community as compared to only 5% of small urban PHNs, a full 41% were neutral on this issue. Caution should be used when conceptualizing and defining the importance of anonymity.

The limitations of this study include the fact that all the study PHNs lived in rural and small urban communities in British Columbia, and were employed by regional health authorities. Most communities were resource-based. Different employers, employment settings, and types of communities may affect PHN job and community satisfaction and retention differently.

In summary, retention of PHNs in rural areas of British Columbia was found to be complex. While PHNs perceived moderate overall job and community satisfaction, there were some substantial areas of their work life that caused them some difficulties. These included the ability to stay current, and infringement on their private time. The PHNs' written comments suggested that while job and community satisfaction are important to consider in retention, filter factors – which are prompts for

some to stay, and limiters for others – merit further consideration. If rural health authorities are to successfully address the retention of public health nurses, it will be important to enhance the PHNs' practice environment, such as providing new ways for nurses to stay current or developing innovative communities of practice models.³⁷ The findings also point towards the need for health authorities to work with other community partners and industries to enhance the economic and social well-being of rural communities, features that may perhaps be most important in retaining this component of the rural health workforce.

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RÉSUMÉ

Contexte : Malgré le besoin pressant de retenir les infirmières et infirmiers autorisés en milieu rural, on connaît très peu ce qui influence leur décision de conserver leur emploi actuel. Notre étude avait deux objectifs : analyser la satisfaction des infirmières et infirmiers de santé publique (ISP) à l'égard de leur emploi et de leur collectivité; et associer la satisfaction à l'égard de l'emploi et de la collectivité à la décision de conserver son emploi actuel dans les zones rurales de la Colombie-Britannique.

Méthode : Nous avons posté un sondage à tous les ISP de première ligne de 48 collectivités rurales et petites collectivités urbaines de la Colombie-Britannique. Sur les 164 ISP admissibles, 124 ont répondu (taux de réponse de 76 %).

Résultats : Les ISP étaient surtout satisfaits de leur statut professionnel, de leurs interactions et de leur autonomie au travail, de l'acceptation de leurs partenaires par la collectivité, du caractère accueillant de la collectivité et de leurs amis. Elles et ils étaient moins satisfaits de leur salaire. Nous n'avons pas constaté de lien entre la satisfaction à l'égard de l'emploi ou de la collectivité et la conservation des emplois. Ce sont plutôt les « facteurs filtres » comme l'âge, la retraite, les besoins familiaux et l'économie qui influençaient l'intention des ISP de rester ou de partir.

Conclusion : Si l'on veut retenir les ISP en milieu rural, leurs circonstances familiales et économiques mériteraient une attention plus grande, tout comme leur expérience de vie et de travail dans les collectivités rurales.