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WINTER EDITORIAL

Changes in Acute Care: Questions in Need of Answers

While the field of acute care is diverse, it can be conceptualized by a number of shared characteristics. Generally speaking, acute care deals with the assessment and treatment of sudden and unexpected illnesses or injuries. These events tend to be life-threatening and accompanied by severe pain. They may be characterized either as discrete or episodic events. Not surprisingly, the primary health objective is to save the patient's life. Consequently the field of acute care has depended on the advanced technologies and clinical expertise of tertiary care settings.

Dramatic changes in the health care system underscore the fact that acute care as we have known it is being revolutionized. Two trends in particular have the potential of threatening the health of families and communities; namely, early hospital discharge and reliance on families and local community clinics for the convalescence period. We use the word "potential" because of the paucity of research into their effects on the patient, family, and health care system.

The shifts from hospital to home care, from professional caregiving to family caregiving, have occurred at an unprecedented rate and have caught both the family and the community off-guard and ill-equipped to handle the demands of caring for the acutely ill patient at home. Patients are often discharged home in unstable conditions and require complex treatments. Most families lack the experience, knowledge, and specialized skills to care for their family member with confidence. What we often fail to appreciate is that many families have themselves been traumatized by the acute care episode and are in need of help.

Many of today's families lack the structure to support a caregiving role. Prior to the industrial revolution, the care of the ill fell to families. With the industrial revolution hospitals gradually assumed more responsibility for the care of the acutely ill. However, the family continued to play a major role. In fact, the traditional family structure enabled families to assume the responsibility of the care of its ill members. Even with the two-adult nuclear family with its clearly delineated roles that ascribed to women the roles of homemakers and care providers along with an extended family who often lived in close proximity, the emo-

tional and financial burdens of caring for an ill member were enormous. Medicare was created to ease these burdens.

Unlike the family of yesteryear, today's family is at a great disadvantage. Many family structures are not resilient enough to absorb the strain of caring for an ill member. Mobility has weakened families' support network and many families find themselves bereft of a social network that can be counted upon to provide sustained help. Moreover, many women are unprepared to assume the role of care provider given their many other roles and responsibilities. In addition, this generation has come to expect that care for the ill is primarily the responsibility of professionals and institutions and find themselves inadequately prepared to assume the role of caregiver. They have also come to expect miracles from medical science and feel entitled to the very best and the very latest treatments and care. Furthermore, many communities lack the needed type of services, the appropriate personnel, and the financial resources to deal with the increased demands for service.

In order for nurses to meet the new clinical challenges brought about by shifts in health care, we need to reorient our research. Up until now, the major focus of our research of acute care has centred on the patient in hospital. Yet this orientation, although still important, is no longer sufficient to guide practice decisions, shape health care services, and influence policy. We need to ask ourselves such questions as: "What type of knowledge and clinical skills are required to nurse patients with higher acuity levels in hospital and at home?" "What is the impact of the acute event and the patient's illness on caregiver's health, psychological well-being, coping processes, and level of functioning in the short and long-terms?" "What are the indicators of a family's readiness to assume the caregiving role?" "What happens to patients and families during the transition phase from tertiary care to home care?" "What type of services do families need and from whom?" "What nursing strategies are most effective in supporting patients and families to cope with different phases of the acute event?" "What is the profile of families who can best benefit from nursing care?" "What type of health services do patients and families require during different points in the convalescent trajectory?" "What is the role of nursing within a collaborative framework of multidisciplinary practice?" "What are the indicators that nursing has made a difference to patient and family outcomes?"

The profession that has knowledge of patients' and families' needs will not only find itself in a strong position to meet the many challenges of the new health care system but will also be in a unique position to influence its direction. The right type of knowledge is dependent on asking the right set of questions. We believe that nursing has been asking the right questions. Now what we need to do is to find the answers.

**Mary Grossman
and Laurie N. Gottlieb
Editors**

ÉDITORIAL D'HIVER

Les changements dans les soins aigus : Des questions en mal de réponses

Le domaine des soins aigus est diversifié, pourtant, un certain nombre de caractéristiques communes permet leur conceptualisation. D'une manière générale, les soins aigus signifient l'évaluation et le traitement de maladies ou de blessures soudaines et inattendues. Celles-ci mettent souvent la vie de la personne en danger et sont assorties de douleurs intenses. On peut les décrire comme des événements discrets ou épisodiques. Bien évidemment, le principal objectif est de sauver la vie du malade. En conséquence, le domaine des soins aigus s'est mis à dépendre des technologies de pointe et des compétences cliniques des établissements de soins tertiaires.

Les changements radicaux au sein de l'infrastructure sanitaire mettent en évidence le fait que les soins aigus tels que nous les avons connus sont en pleine révolution. Deux tendances en particulier peuvent éventuellement menacer la santé des familles et des collectivités, à savoir, les sorties précoces de l'hôpital et la façon dont on se fie aux familles et aux centres locaux de services communautaires pour les périodes de convalescence. Nous mentionnons «l'éventualité» car les études concernant leurs effets sur le malade, sa famille et l'infrastructure sanitaire sont quasiment inexistantes.

La transition des soins en hôpital en soins à domicile, et des soins prodigués par des professionnels en soins prodigués par la famille s'est faite très rapidement; elle a pris au dépourvu autant les familles que la collectivité et les a laissées désarmées face aux exigences des personnes souffrant d'affections aiguës. On donne souvent congé aux malades alors qu'ils sont encore fragiles et ont besoin de traitements complexes. La plupart des familles manque d'expérience, de connaissances et de compétences spéciales pour prendre soin de leur proche en toute confiance. Bien souvent, nous ne remarquons pas que de nombreuses familles ont été traumatisées par une période de soins aigus et qu'elles ont besoin d'aide.

De nos jours, bien des familles n'ont pas la structure qui leur permettrait de tenir leur rôle de soignantes. Avant la révolution indus-

trielle, il incombait aux familles de prendre soin de leurs malades. Grâce à celle-ci, les hôpitaux se sont mis à assumer la responsabilité des soins aux personnes gravement malades. Cependant, la famille ne cessait de jouer un rôle important. En effet, la structure traditionnelle de celle-ci lui permettait d'assumer la responsabilité des soins à tous ses membres. Malgré la famille nucléaire composée de deux adultes dont les rôles clairement définis attribuaient aux femmes celui de maîtresse de maison et de soignante, souvent avec la famille étendue vivant à proximité, la charge affective et financière des soins aux malades était énorme. *Medicare* a été créé pour alléger ce fardeau.

Contrairement à la famille d'antan, celle d'aujourd'hui est en position de faiblesse. De nombreuses structures familiales ne sont pas assez résistantes pour supporter les tensions qu'entraînent les soins à un malade. La mobilité a affaibli les réseaux de soutien familial et nombreuses sont les familles qui se trouvent privées d'un réseau social sur lequel elles peuvent compter pour leur apporter un soutien prolongé. De plus, bien des femmes ne sont pas prêtes à assumer un rôle de soignantes, étant donné leurs nombreux autres rôles et responsabilités. D'autre part, la génération actuelle s'attend à ce que les soins aux malades soient la responsabilité surtout des professionnels et des établissements, et elle se trouve mal préparée pour assumer le rôle de soignant. On s'attend également à ce que les sciences médicales fassent des miracles et on estime avoir droit aux meilleurs traitements et aux soins les plus modernes. Beaucoup de collectivités n'ont ni les services nécessaires, ni le personnel adéquat, ni les ressources financières pour gérer les demandes de services en hausse.

Pour que les infirmières puissent relever les nouveaux défis cliniques qu'entraînent les changements dans les soins sanitaires, nous devons réorienter notre recherche. Jusqu'à maintenant, nous avons concentré celle-ci sur les soins aigus offerts au malade à l'hôpital. Cependant, cette orientation, bien qu'elle ait son importance, n'est plus suffisante pour guider les décisions pratiques, façonner les services de soins sanitaires et influencer les politiques. Nous devons nous poser les questions suivantes : *Quelles connaissances et compétences cliniques nous faut-il pour prendre soin de malades dont le niveau d'acuité est plus élevé, en hôpital et à domicile ? Quel est l'effet de l'accident grave ou de la maladie sur la santé du soignant, son bien-être psychologique, ses mécanismes d'adaptation et sa manière de fonctionner, à court et à long terme ? Qu'est-ce qui indique qu'une famille est prête à assumer un rôle de soignant ? Qu'arrive-t-il aux malades et aux familles durant la période de transition des soins tertiaires aux soins à domicile ? De quel genre de services ont besoin les familles, et qui peut les leur offrir ? Quelles stratégies de soins infirmiers sont les plus efficaces pour*

soutenir les malades et leur famille, et les aider à faire face aux diverses phases de l'accident ? Quel est le profil de la famille qui peut tirer le meilleur profit de soins infirmiers ? De quels services sanitaires ont besoin les malades et les familles au cours des différentes périodes de la convalescence ? Quel est le rôle des sciences infirmières dans un cadre de collaboration d'une pratique pluridisciplinaire ? Qu'est-ce qui indique que les soins infirmiers ont modifié les résultats sur le malade et la famille ?

La profession qui est consciente des besoins des malades et de leur famille ne se trouvera pas seulement dans une position de force pour relever les nombreux défis de la nouvelle infrastructure sanitaire mais sera également dans une position unique pour influencer son orientation. La connaissance appropriée dépend du fait que l'on pose les bonnes questions. Nous croyons que les sciences infirmières posent les bonnes questions. Ce qu'il faut maintenant, c'est obtenir les bonnes réponses.

Mary Grossman
et Laurie N. Gottlieb
Rédactrices

Hospital Nurses and Health Promotion

Alex Berland, Nora B. Whyte, and Lynne Maxwell

La présente étude porte sur le rôle des infirmières en soins de courte durée dans la promotion de la santé. On a pour cela utilisé un sondage ayant pour but de mesurer la connaissance, les comportements et la pratique des infirmières par rapport à la promotion de la santé. En 1992, on a sondé les infirmières soignantes de huit hôpitaux en Colombie-Britannique. Selon les répondants, la promotion de la santé fait partie intégrante des soins infirmiers. Néanmoins, plusieurs barrières dans le milieu hospitalier limitent leurs efforts. Ces barrières ont pour nom : manque de temps, ressources insuffisantes pour enseigner aux malades et manque de continuité dans les soins. Les répondants ont établi les différents types de soutien, à savoir, l'attitude positive des malades et de leur famille, ainsi que celle des collègues, et le soutien de l'hôpital pour les activités liées à la promotion de la santé. L'étude conclut que les infirmières en soins de courte durée sont une ressource sous-utilisée pour la promotion de la santé. Il faut donc utiliser plus efficacement la connaissance, les comportements et les compétences des infirmières pour promouvoir la santé en milieu hospitalier.

This study examined the role of acute-care nurses in health promotion (HP), using a survey designed to measure the knowledge, attitudes, and practices of nurses in relation to HP. Staff nurses in eight British Columbia hospitals surveyed in 1992 responded that HP is an integral part of nursing care, yet several barriers in the hospital environment inhibit their efforts in this domain. The perceived barriers are lack of time, insufficient resources for patient teaching, and lack of continuity of care. Respondents identified positive features as the attitudes of patients and families, supportive colleagues, and hospital support for HP activities. The study concludes that acute-care nurses are an under-utilized resource for HP. The challenge is to make more effective use of nurses' knowledge, attitudes, and skills in promoting health in the hospital setting.

In Canada, the nursing profession advocates a strong role for nurses in health promotion (HP) (Canadian Nurses Association, 1988, 1992; Ritchie, 1988), yet little is known about how nurses in hospitals actually incorporate HP into their practice. The study's purpose was to describe

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the current HP role of nurses in acute-care settings: it examined the HP-related activities, knowledge, and attitudes of registered nurses in both urban and rural hospitals in British Columbia; it explored barriers and supports for hospital-based HP. The study used the World Health Organization (1986) definition of HP – “the process of enabling people to increase control over and improve their health.”

Literature Review

To date few descriptions of the practice of hospital nurses in relation to HP have been published. A British study (Gott & O'Brien, 1990) that examined the attitudes and activities of nurses working in community and hospital settings found that nurses' HP activities were individualistic and lifestyle-focused, and that nurses had few opportunities to contribute to HP at the community or societal level. Gott and O'Brien concluded that there should be greater emphasis on national policies for health and more interdisciplinary collaboration.

In another British study, Latter et al. (1992) examined health education as a component of nursing practice in acute-care hospitals. Reported activities included counselling about healthful lifestyles, encouraging self-care, dispensing information, and encouraging family participation in care. Information-giving was cited as the most frequent health-education activity, facilitating patient or family involvement in care being less common. Although nurses view their role as an information-giving one, difficulties in fulfilling this role were noted in While's 1992 study of children's hospital experiences. Parents considered lack of information from hospital staff a major shortcoming, particularly lack of preparation of parents and child for discharge.

Several authors suggest that nurses should pay greater attention to HP and disease-prevention in all settings, including acute care (Aiken, 1990; Noble, 1991; Pender, Barkauskas, Hayman, Rice, & Anderson, 1992; Spellbring, 1991). Spellbring identifies several components of nurses' HP role: consultant, case manager, health educator, advocate. Jenny (1993) notes that patient education is becoming increasingly important as health care in Canada is redefined; she advocates the use of innovative strategies such as computer-assisted instruction, telephone hot lines, and community outreach programs. Lack of evaluation of the effectiveness of nurses' roles in HP is a major weakness in the literature. A study by Wyness (1990) on the outcomes of a structured education program for hospital patients taking warfarin is an example of the kind of research that is needed.

An examination of current nursing theory reveals that HP is viewed as fundamental to nursing and is a common thread in definitions of the profession (Gottlieb & Rowat, 1987; Parse, 1987; Registered Nurses Association of British Columbia [RNABC], 1990). However, actual descriptions of how to put an HP philosophy into practice in hospital nursing are rare.

The issue of whether nursing education prepares practitioners for roles in HP has been discussed by Noble (1991) and Tilley, Gregor, and Thiessen (1987). The nurse's role in teaching has often been oriented to disease rather than health. Several authors recommend increasing HP content (Clarke, 1991; Gott & O'Brien, 1990; Henderson, 1989). Pender and her colleagues (1992) advocate that HP content be incorporated into all undergraduate and graduate nursing programs. Furthermore, educators must prepare future practitioners with the competence to contribute to policy development at all levels in the health-care system (Tenn & Niskala, 1994).

The gaps in the literature reinforce the timeliness of exploring the knowledge, attitudes, and practices of acute-care nurses in the emerging HP field. The authors' earlier study (Berland & Whyte, 1991) used a focus-group approach: a small group of hospital nurses examined HP topics during three two-hour sessions.

In this first phase of our study, volunteers from the nursing staff of a metropolitan hospital formed the focus group. The sessions included carefully planned questions about the topic (Basch, 1987; Krueger, 1988). Content analysis, later validated with the participants, yielded descriptive data about facilitators, barriers, and daily HP practice.

Featured in the examples of daily HP practice were fostering mutual aid, planning for discharge, empowering patients, caring for families, exhibiting healthy behaviour, and normalizing life for hospitalized patients. Key facilitating influences were positive attitudes, informal learning opportunities, and administrative support. The principal barriers were seen as lack of time and continuity.

The most striking outcome of the focus-group sessions was the participants' recognition of features in their own practice. They had stated that HP is implicit in the nurse's role as seen from the patient's perspective: *It is sort of an everyday thing; You can't get away from it* (italicized, unattributed comments are from focus-group participants or survey respondents). HP had become taken for granted to such an extent, however, that it was invisible to the nurses; once this was recognized, HP was matter-of-factly reclaimed. Due to the potency of the

participants' responses, and the enthusiasm that greeted publication of the findings, we conceived of a follow-up study.

The research objective of the current study was to validate those earlier focus-group findings. The sample chosen also permitted comparison of HP activities in an urban teaching hospital with small, community hospitals.

Conceptual Framework

The PRECEDE-PROCEED planning model is used to assess factors influencing the HP practice of health professionals. It was chosen because it has broad applicability and has been widely tested. This model is specifically intended to "identify targets for intervention... generate specific objectives and criteria for evaluation.... [and provide] additional steps for developing policy and initiating the implementation and evaluation process" (Green & Kreuter, 1991, p. 22).

The PRECEDE-PROCEED model provides a convenient method of classification because it groups specific influences on HP practice under three broad rubrics. Knowledge, attitudes, beliefs, skills, incentives, and rewards can be grouped under predisposing, reinforcing, and enabling factors, the organizing categories of the PRECEDE-PROCEED model. According to Green and Kreuter (1991), predisposing factors arise from the knowledge and attitudes that underlie the motivation and confidence of health professionals. Enabling factors include resources, time, and the practice environment. Reinforcing factors include visible results, feedback from patients, and support from colleagues. All three broad categories may contain both positive and negative characteristics.

Purpose

The purpose of the study was to describe the current knowledge, attitudes, and practice of hospital nurses concerning HP. The research question was: what are hospital nurses' perceptions of their knowledge, attitudes, and practice regarding HP? Five general questions shaped the data analysis:

1. What HP activities do nurses say they carry out in acute-care settings?
2. What is the effect on stated practice and attitudes of demographic variables such as age, basic and continuing education, and experience?
3. What are the sources of nurses' knowledge about HP?

4. What do hospital nurses say about their attitudes towards HP?
5. What factors do nurses perceive as enhancing or inhibiting their HP efforts?

Method

This study evolved from an earlier exploration of nurses' knowledge, attitudes, and practices regarding HP, using a focus-group approach (Berland & Whyte, 1991). The focus-group technique originated in market research. Using a moderator to interview a group can elicit insights and comments unlikely to surface without the stimulating effects of group interaction. Given the scarcity of research, the technique helped us generate hypotheses and obtain detailed answers to novel questions. We also learned about the vocabulary the nurses' used to describe their practice. The insights formed the basis for the subsequent questionnaire survey.

Sample

The study used a comparative survey design, with an unintentional convenience sample as described below. Questionnaires were sent to a total of 300 registered nurses; this sample size was judged sufficient for study purposes, given the expected rate of return and the questionnaire design. One half of the sample ($n = 150$) worked in a metropolitan teaching hospital with about 1,800 nurses on staff. The other half of the sample ($n = 150$) were nurses working in eight community hospitals throughout B.C. (the total nurse population of these hospitals is not known).

The response rate overall was 57% ($n = 171$). Nurses from the teaching hospital made up 45% of respondents ($n = 77$). Overall, 65% of all respondents worked full time. Respondents worked in critical care ($n = 20$), medicine ($n = 35$), surgery ($n = 25$), operating rooms ($n = 3$), palliative care ($n = 8$), psychiatry ($n = 9$), long-term care ($n = 12$), obstetrics ($n = 8$), pediatrics ($n = 5$), cardiac sciences ($n = 10$), ambulatory care ($n = 4$), emergency ($n = 8$), and other areas ($n = 24$).

Most respondents had been nursing 10 years or more ($n = 104$). Compared to the overall population of registered nurses in B.C., the study respondents were young (unpublished RNABC 1990 registration data). Of the community hospital respondents, 14.6% had a B.S.N. ($n = 13$) and 35.4% had post-R.N. certification ($n = 32$), which closely resembled the educational level of all B.C. nurses (14.4% and 34.1%). The teaching hospital respondents, in contrast, were more likely than

B.C. nurses overall to have completed a B.S.N. (30.7%; $n = 25$), although fewer than the B.C. average had post-R.N. certificates in specialty areas (2.7%; $n = 2$).

Instrument

For Phase 2, we developed a "Healthy Practice Questionnaire" containing 53 core questions rated on a five-point Likert scale ("strongly agree" to "strongly disagree"). The questions were concentrated on the more uniformly supported statements of the original focus group, and a conscious effort had been made to use the words of the focus-group participants.

Two open-ended questions in the questionnaire elicited written comments: "What do you think are the most important factors influencing the hospital nurse's role in HP?" and "Additional comments." Also, demographic data were collected on a brief questionnaire designed for the study.

The 53 items were classified for analysis into four subscales based on the PRECEDE-PROCEED model as the underlying framework: Perceived Self-Efficacy – e.g., "I am comfortable teaching patients about self-care" ($n = 5$); Predisposing Factors – e.g., "A nurse must assume the role of patient advocate" ($n = 33$); Enabling Factors – e.g., "My hospital is supportive of health-promotion activities" ($n = 16$); and Reinforcing Factors – e.g., "If the family/caregiver supports a patient's lifestyle change, a nurse's health-promotion efforts are more effective" ($n = 4$).

Two additional subscales rated respondents' HP knowledge ($n = 4$) and promotion activities ($n = 10$). The subscale Actual Knowledge asked respondents how they had learned about HP. The subscale Promotion Activities examined their actual practice. This subscale included items about the respondents themselves and their own knowledge, activities, or practice. One item, for example, stated, "I change hospital rules or routines to accommodate patients' control." This subscale was scored by assigning a unit value of 1 to each item to which the nurse responded either "Agree" or "Strongly Agree" on the five-point Likert scale.

All other subscales, except Promotion Activities, were scored by summing responses to those items using the Likert scale. In this way the responses "Disagree" and "Strongly Disagree" were included in the average value for each item.

Three external nurse researchers reviewed the questionnaire for inappropriate jargon, value-laden words, leading or double-barrelled questions, and general content. To test face validity, a pilot test of the survey instrument was administered in advance to a group of hospital nurses. Feedback indicated that the questions and length of time allotted to complete them were acceptable.

Cronbach's coefficient alpha was used to assess the internal-consistency reliability of the subscales. Cronbach's alpha indicated that the reliability for all 53 items on the survey was .87, an acceptable level. Among the subscales, however, reliability varied (Table 1). Reliability was deemed adequate for Predisposing Factors, Enabling Factors, Actual Knowledge, and Perceived Self-Efficacy, but not for Reinforcing Factors. This subscale was not used in any later analyses.

Table 1

Means, Standard Deviations, and Cronbach's alpha for Subscales

Subscale	n Items	Theoretical	X	SD	α
		Range			
Predisposing Factors	33	1-5	3.98	.35	.88
Enabling Factors	16	1-5	3.06	.37	.69
Reinforcing Factors	4	1-5	3.61	.46	.04
Actual Knowledge	4	1-5	3.76	.62	.52
Perceived Self-efficacy	5	1-5	3.72	.55	.73
Promotion Activities	10	1-10	7.37	.16	

Procedure and Recruitment

For this Phase 2 study, the survey approach was used to validate the focus-group findings. The research proposal was reviewed and approved by the ethics committees of the teaching hospital and the university. Teaching and community hospital participation were secured in advance.

In the teaching hospital sample, surveys were sent to individual nurses selected at random by the personnel department. Nurses at the eight community hospitals made up an unintentional convenience sample. The surveys were distributed to staff through nursing administrators at each hospital. Although a covering letter to the senior nurse at each hospital requested randomization, it is not certain that randomization was carried out in all cases. The questionnaires may have been distributed only to nurses on selected units, only to nurses who were available, or randomly.

The survey included a covering letter assuring confidentiality and anonymity, as well as a return-addressed envelope. Respondents were instructed to answer the questions from their experience as hospital nurses. A follow-up reminder card encouraged them to complete the questionnaire.

Data Analysis

Because the objective of the current study was to validate earlier focus-group findings, the analysis was descriptive and comparative. Data from the completed surveys were analyzed using SPSS-X Data Analysis System Release 3.0. Most of the demographic variables were categorical (for example, age, level of education, length of time practising, participation in continuing-education programs, hospital size). Data were analyzed using descriptive statistics, correlations, and one-way analysis of variance, followed by multiple comparisons using the Student-Newman-Keuls procedure if the *F* ratio for the latter analysis was significant. The independent variables of education, age, participation in continuing-education programs, practice setting, whether community hospital or teaching hospital, and length of time in practice were compared consistently for all subscales. All statistical tests were non-directional, with an alpha level of .05 used as the criterion of statistical significance.

Responses to the two open-ended questions were transcribed and coded into thematic categories. To compare quantitative and qualitative analyses, each category was then identified as enabling, reinforcing, or predisposing. Responses in each category were summarized into a brief narrative, to supplement the findings from the survey items.

Limitations

The response rate, of 57%, is acceptable for a mail survey. However, the sampling method was a limiting factor in that the study inadvertently used a convenience sample of hospitals; the possible non-random distribution in some of the community hospitals weakens the generalizability of the findings. The age of the respondents and the nature of the topic raise the question of self-selection bias in returning the survey. An alternative model for analysis could also be considered. The survey instrument itself warrants further testing and refinement, particularly regarding reinforcing factors. Adaptation of the instrument for use in different settings, such as long-term care facilities, would provide information on HP practice by nurses in non-acute-care settings.

Table 2
HP Activities in Nursing Practice

Survey Item	Those Responding "Agree" or "Strongly Agree"
There are potential health benefits for patients when I teach them about their medications.	100 %
Healthful lifestyles is an important topic for patient teaching.	98.3
Nursing practice includes comforting patients and their families/caregivers.	98.3
Teaching patients how to care for themselves is an important part of a nurse's role.	98.2
Ensuring a healthful work environment is important to me.	97.6
It is important that hospital nurses be involved in discharge planning.	97.1
I involve patients' families/caregivers in HP when appropriate.	96.5
HP activities include enhancing patients' coping skills.	95.3
I encourage patients facing discharge to carry on with healthful behaviours learned in the hospital.	93.6
Teaching patients about disease processes is an important part of a nurse's role in HP.	91.3
A nurse must assume the role of patient advocate.	91.2
Family members/caregivers are included in a hospital nurse's HP.	91.2
Encouraging patients to advocate for themselves is part of a nurse's role in HP.	88.8
HP is an "everyday thing" for nurses.	81.2
HP principles apply in caring for terminally ill patients.	78.9
Sometimes nurses plan activities that "normalize" the hospital environment.	78.3
Encouraging patients to share experience about procedures is part of my role in HP.	76.6
I can refer patients to community agencies.	76.0
There are health benefits for depressed patients that result from a nurse's counselling efforts.	75.5
Counselling patients following physical abuse is part of a nurse's role.	57.9
HP group work with patients is sometimes part of a hospital nurse's practice.	57.3
I change hospital rules or routines to accommodate patients' control.	52.1
I direct my HP activities to my nursing colleagues.	48.6

Results

Health Promotion Activities in Nursing Practice

The survey included questions designed to elicit information to answer the research question "What HP activities do nurses carry out in acute-care settings?" As shown in Table 2, the respondents recognized a wide variety of HP activities as carried out by nurses.

The highest-rated HP role for nurses is in patient teaching directed toward self-care. Respondents also cited involvement with the patient's family and caregivers as an important aspect of HP. Less common HP tasks are group work with patients and changing hospital routines to facilitate control by patients.

In answer to the question "How often do you carry out health promotion activities, including health teaching?," respondents reported that they engaged in some form of HP daily (61%) or weekly (28%). In answer to another question, more than 80% characterized HP as an "everyday thing" for nurses.

The subscale Promotion Activities determined the extent to which respondents themselves practised specific activities. The mean value of responses to these 10 questions was 7.37 (range 1-10; *SD* 1.66), suggesting that the respondents are in fact involved in a range of HP activities. Furthermore, this subscale had a moderate correlation ($r = .37, p = .01$) with their reported frequency of general HP activity.

Given the emphasis, in the literature, on education for HP, we were interested in the impact of education on the practice of our respondents. Using one-way ANOVA, nurses with post-R.N. certification reported engaging in more HP activities than did diploma nurses ($M: 8.25$ vs. $7.08, p < .002$). General continuing education was examined in responses to the statement "I have attended continuing-education programs that include content on health promotion." Those who responded positively, 47% of respondents, scored significantly higher on Promotion Activities ($p < .05$). There were no other apparent effects arising from the demographic variables.

Knowledge, Attitudes, and Beliefs about Health Promotion

This part of the survey explored two questions: "What are the sources of nurses' knowledge about HP?" and "What are hospital nurses' attitudes about HP?" Knowledge, attitudes, beliefs, values, perceived needs, and abilities can help motivate and contribute to feelings of con-

fidence about engaging in HP (Green & Kreuter, 1991). This component was assessed using two subscales, the Predisposing Factors subscale and the Perceived Self-Efficacy subscale.

Firstly, the Predisposing Factors subscale explored nurses' familiarity with the scope, concepts, and application of HP. The mean response to all questions in this subscale was "Agree" (3.96), indicating that the respondents were familiar with these HP concepts and practices. Several questions explored nurses' attitudes to HP. At the most basic level, 93% of the respondents agreed with the statement "Health promotion is an important part of my role." More than 81% agreed with the statement "Health promotion in the community is part of a nurse's role as a member of the community."

There was a moderate correlation ($r = .40, p < .001$) between overall score on the Predisposing Factors subscale and reported frequency of carrying out HP tasks. A high correlation was seen between an individual's score on this subscale and the number of HP activities they actually engaged in ($r = .70, p < .001$).

An interesting discrepancy emerged from the second approach to analyzing nurses' knowledge, Perceived Self-Efficacy, meaning a nurse's comfort level with his or her knowledge and ability to counsel patients about HP (Green & Kreuter, 1991). Perceived Self-Efficacy was measured in the questionnaire by a subscale of five questions. More than 76% of respondents felt that their knowledge about self-care was adequate; 83% stated that they were comfortable teaching patients about self-care; 72% felt they could advocate for a healthy hospital; and 70% felt they could advocate for a healthy community. However, only 42% of the respondents agreed that they were satisfied with their skills in HP. Overall score on this scale was moderately correlated with the number of HP tasks they actually undertook ($r = .39, p < .001$).

A significant difference was seen in responses to the Predisposing Factors scale, according to level of education: 60% of respondents stated that their basic nursing program included HP; 39% had taken courses in HP since graduation. Nurses who had post-R.N. certification scored significantly higher on the Predisposing Factors scale than diploma nurses ($M: 135.16$ vs. $129.54, p < .05$). There was no difference among baccalaureate nurses and the other two groups. Again, nurses who had taken continuing-education courses scored significantly higher on the Predisposing Factors ($p < .001$) and Perceived Self-Efficacy ($p < .05$) subscales.

The content analysis of responses to open-ended questions adds to the findings about knowledge for HP. Many respondents wrote that lack of HP knowledge and skills was a significant barrier to nurses engaging in HP activities. They proposed that greater attention be given to HP in both basic and continuing-education programs, including specific content on teaching methods, assessment of clients' learning needs, and knowledge of community resources.

Barriers and Facilitators

Factors external to the nurse can help or hinder HP. The survey included questions designed to elicit information to answer the research question "What factors enhance or inhibit HP by nurses?" At the top line, a moderate correlation ($r = .30, p < .001$) was seen between the respondents' stated frequency of engaging in HP activities and their score on the subscale Enabling Factors. There was no other significant difference, based on age, highest level of education, length of time in practice, or hospital size. The predominant enabling factors identified by the nurses were teamwork, time, written records, continuity of care, and consistency of patient teaching (Table 3).

Responses to the open-ended questions provided more detail. The most critical factor for these nurses was time. Although they acknowledged the importance of HP, more than 100 respondents cited time as a barrier. HP may be an "everyday thing," but it is not always a priority. Specifically, lack of time because of heavy workloads was seen as preventing nurses from performing HP tasks that are time-intensive, such as teaching, locating resources, making referrals, and communicating with family members. One respondent explained: *Nurses are the perfect people to have advocating, promoting, and teaching health and self-care. However, the reality is that there is very little time (high acuity, short staffed) to spend more than minutes at a bedside.*

As barriers, respondents identified inadequate care planning, lack of authority in decision-making about patient care, and nurses' task orientation. But for one nurse, the delivery model was conducive to HP: *Primary nursing facilitates health promotion as you know the patient so well.* Continuity of care within the hospital was seen as facilitating HP. Several respondents noted that having different patient assignments on each shift interfered with continuity. Consistency in health teaching was also viewed as an important factor. Continuity between the hospital and the community was identified as crucial; respondents expressed a desire for improved communication between hospital nurses and community-based nurses. One nurse identified the lack of follow-up oppor-

Table 3
Enabling Factors

Survey Item	"Strongly Agree" or "Agree"	Neither	"Strongly Disagree" or "Disagree"
There is easy access to up-dated resources on health-related topics that help me in my HP efforts.	40.3%	17.0%	42.1%
There are adequate resources for teaching chronically ill patients coping skills.	26.3	21.1	52.1
Hospital activities on HP topics support a nurse's ability to carry out HP activities.	48.0	25.7	25.2
The team approach to patient care strengthens a nurse's HP efforts.	92.4	7.0	0
My hospital is supportive of HP activities.	66.1	24.0	9.4
Lack of continuity of care between different hospital departments interferes with a nurse's HP efforts.	71.3	17.0	11.7
Time constraints are a barrier to nurses undertaking HP activities.	94.7	3.5	1.8
HP efforts would improve if there were more time for patient conferences, in-services, and bedside teaching.	95.3	3.5	1.2
Hospital nurses' HP efforts would be strengthened by consistent patient teaching.	98.9	0.6	0
Incomplete written records hinder a nurse's HP efforts.	4.7	17.5	77.2
I can refer patients to community agencies.	76.0	11.1	12.3
Knowing about cultural values helps nurses in their HP efforts.	97.1	2.3	0
Learning more about HP will help me provide better patient care.	93.5	4.7	1.2
My experience as a nurse has taught me about HP.	84.2	11.1	4.1
In my basic nursing program, HP was included in the course work.	60.2	14.6	24.5
Since graduation I have taken courses on HP.	39.2	14.6	45.0

tunities as a problem: *It is difficult to find out if health promotion efforts are effective, as you may never see the patient again.*

Respondents frequently identified a lack of adequate resources for health teaching. They suggested user-friendly audio and video resources, as well as up-to-date written material to give to patients and families, and would like to see teaching plans, group sessions for patients, and information on community resources. Several respondents stated that culturally appropriate teaching materials and access to interpreter services would improve their cross-cultural HP efforts, and several saw the need for nurses to develop the skills to use the mass media in educating the public about health. A few mentioned measuring outcomes of HP: *We need tools to help evaluate our health teaching.*

Incentives and Rewards

As we have seen, the subscale on Reinforcing Factors lacked reliability and was not used in the quantitative analysis. However, analysis of the qualitative data revealed common concerns. Nurses in both the teaching hospital and the community hospitals noted that support from colleagues is not only rewarding but essential to successful HP: it is difficult to carry out health-promoting activities in isolation.

Patient-related factors identified as disincentives were unwillingness to learn, acuity of illness, and emotional problems. Supportive families and motivation to change health attitudes were identified as positive factors. Relationships among health-care providers are a factor: common disincentives include communication difficulties, professional territoriality, and conflict over the care plan; incentives include shared goal-setting through ward conferences, learning from the expertise of other disciplines, and support from the team.

Nurses' Advocacy Role

The advocacy role of the nurse as a health promoter in creating fundamental improvements deserves further study. Advocacy is one of the "invisible" aspects of nursing that often go unrecognized. One respondent stated, *Present uncertainty regarding hospital budgets and staff due to budget restraints might hinder ongoing expansion of health teaching.* With the increasing complexity of the health-care system and limited funds for some services, advocacy is becoming even more important. How will nurses find ways to inform policy-makers about the problems they see in their everyday practice?

Discussion

How is HP relevant to the nurse who says, *I am a strong believer in health promotion... It's a shame that people in high places can't get their priorities straight?* Much of the international literature on HP speaks at the level of ideology, and therefore may not provide direction to practitioners (O'Neill & Pederson, 1994). Data from this survey may provide a foundation for giving direction in the setting where most nurses work.

The results indicate that acute-care nurses perceive HP as an essential, independent, attractive, and indeed integral part of nursing. They define HP as encouraging healthy lifestyles, coping skills and self-care, family cooperation, and mutual aid.

These findings are consistent with those of our earlier study, in which we also noted that HP was invisible to the participants. The nurses did not recognize components of their own practice as health promoting until the moderator held up the mirror. Once they acknowledged the work, the respondents enthusiastically depicted themselves as teachers, counsellors, comforters, patient advocates, role models, lobbyists, and mediators in the hospital environment. They revealed that their HP role included much more than teaching about medication side-effects.

This aggregate viewpoint is both richer and more focused than the World Health Organization definition used for our study. It is perhaps more consistent with the perspective of Loomis: "Nursing is the appraisal and enhancement of the health status, health assets, and health potentials of human beings" (Loomis, 1990, p. 83). The hospital nurse's HP perspective is grounded in a unique episode in the patient's life experience. Hospitalization usually represents a personal crisis, or at least a landmark event. Thus the interventions of our respondents reflect a concern with individual and family coping responses that may be broader than the concerns of the mainstream HP movement (Gottlieb, 1992).

Generally, the respondents expressed a positive attitude toward HP concepts; they believed that HP is highly relevant for today's acute-care environments. Without prompting, they also explored issues surrounding appropriate roles in HP. While some felt that all hospital staff should be involved in HP, others saw nurses as the ideal health promoters, and yet others saw HP as a component of specialist nursing. This confusion reflects a lack of direction in applying a health-promoting philosophy in hospital nursing.

The respondents identified numerous factors that affect HP in the hospital setting. Unfortunately, most of these were negative, indicating why it is difficult for staff nurses to incorporate HP into their work. According to Green and Kreuter (1991, p. 408), the "working circumstances of nurses often conspire against implementation of their preventive practices." Based on our findings, it would be easy to glibly say, "Greater emphasis on HP in hospitals is necessary, to improve patients' abilities to gain control over their health." But how will this move hospitals beyond ideology? How can we redirect practice?

At the level of hospital policy, the survey respondents expressed strong support for the notions of interdisciplinary teamwork, continuity of care, and consistency. Some also felt that time constraints indicate that their values regarding HP are not shared by hospital managers. Responsibility for planning and supporting a variety of health-promoting activities must be shared. Green and Kreuter (1991) and Labonte and Little (1992) offer many strategies. Nurses and managers could work together to identify barriers and facilitators, then select strategies and act to overcome barriers. The clear frustration in the respondents' subjective comments indicates that the "low-hanging fruit" of the relevant and the achievable should be a priority. Further, organizing HP into "tasks" could perpetuate its invisibility. An integrated plan for HP should be based in an organizing framework.

The findings regarding education were most interesting. Based on the respondents' self-identified need, and the measurable impact on practice, continuing education on HP topics can be concluded to be of vital importance. Indeed, education aimed at practitioners may have a greater effect than education of student nurses. More short-term courses and workshops on hospital-based strategies, as well as formal credit courses, should be made available. Basic and graduate nursing programs should also place greater emphasis on HP in the hospital setting.

HP practice, as described by our respondents, tends to focus on individual patients, their families, and their caregivers. The nurses in our study reported few activities directed at promoting policies at the agency or health-system level. To fulfil the mandate of HP, more nurses must acquire competency as patient advocates at the system level. Spellbring (1991) points out that advocacy requires an understanding of the health-care system and available resources. Hospital nurses state that they lack knowledge about community resources. This is becoming an increasingly serious drawback, considering the shift to community-based care. The communication gap between hospital nurses and

community-based nurses should be addressed. Practical examples would be inter-agency continuing education programs and nursing councils representing all agencies in a community.

Research programs are critical if the role of nursing in HP is to develop. Gottlieb (1992) points out that nursing must become more explicit about its HP models, frameworks, and research. The deficiencies in this exploratory study suggest the need for hypothesis-driven quantitative research. Some questions arising from this study are: What type of nursing education has the greatest impact? What are patients' perspectives of nurses' HP activities? What are the outcomes for patients of HP by nurses? What strategies foster consistency of health teaching in hospitals? Do these strategies make a difference to patient outcomes? Do specific strategies to strengthen communication and collaboration between hospital and community nurses make a difference? What socio-political factors affect nursing's ability to contribute to HP initiatives?

Conclusion

This study assessed knowledge, attitudes, and practice related to HP, taking into consideration positive and negative predisposing, enabling, and reinforcing factors. The actual practices of the respondents were consistent with the World Health Organization definition of HP. As expected, activities focus on individual patients and their families or their caregivers. Hospital nurses' support was summed up this way: *Health promotion is important. However, I do not believe we utilize the time that patients are in the hospital to effect teaching and behaviour change to its potential.*

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Valuing Research in Clinical Practice: A Basis for Developing a Strategic Plan for Nursing Research

Lorna Butler

Afin d'élaborer un plan stratégique pour la recherche en sciences infirmières dans un environnement clinique, on a effectué un sondage dont le but est d'examiner les comportements qu'ont les infirmières face à la recherche comme partie intégrante de leur travail. Les 348 infirmières qui ont répondu représentaient divers types d'infirmières : les infirmières soignantes, les infirmières chefs, les infirmières cliniciennes spécialisées, les infirmières monitrices, les infirmières en soins prolongés, les infirmières qui ont un rôle élargit et une stomathérapeute. On les a divisées en deux groupes : les infirmières soignantes et les infirmières cadres. Les répondantes ont précisé qu'elles attachaient une grande importance à la recherche et qu'elles pensaient que la division des sciences infirmières soutenait la recherche. Elles étaient en fait peu nombreuses à faire de la recherche ; elles ont fait état de leur manque de confiance dans leur capacité à participer à l'élaboration et à la mise en oeuvre de recherches. La plupart des infirmières soignantes n'utilisaient pas la recherche pour leur travail, contrairement à la majorité des infirmières cadres. Les facteurs expliquant autant l'utilisation de la recherche que font les infirmières, que leur participation dans l'élaboration et la mise en oeuvre de la recherche, étaient différents pour les deux groupes.

With a view to developing a strategic plan for nursing research in a clinical practice setting, a survey was conducted to examine nurses' attitudes towards research as a part of their work. The 348 nurse respondents represented various nursing roles: staff nurses, head nurses, clinical nurse specialists, nurse educators, hospice nurses, expanded-role nurses, and an enterostomal therapist. They were classified into two groups, staff nurses and leadership nurses. The subjects reported that they valued research highly and that they believed the nursing division was supportive of research activities. Few were actually involved in conducting research; the nurses reported a lack of confidence in their ability to participate in designing and conducting studies. Most staff nurses were not using research in their work, while the majority of leadership nurses were. Factors that explain both research use by nurses and their participation in designing and conducting research differed for the two groups.

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Introduction

There is a growing trend in Canadian health-care institutions towards including nurse researchers as part of the nursing division, with varying arrangements being made between nursing administrators and university faculties to support research activity in hospitals. The increasing opportunities for nurses to take up doctoral studies in Canada have contributed to the new expectation that research and scholarly work will be part of clinical nursing.

Background Literature

The literature indicates that in 1986 the majority (67%) of Canadian teaching hospitals were involved in some form of nursing research (Thurston, Tenove, Church, & Bach-Paterson, 1989). Since that time, nurse researchers and administrators have responded to the need for development of institutional research programs (Eagle, Fortnum, Price, & Scruton, 1990; Fitch, 1992; Logan & Davies, 1995; McKiel & Dawe, 1991). A recurring theme in these programs is the need for strong administrative support and acceptance by staff nurses of the relevance and usefulness of research.

In today's climate of health reform, modes of care delivery will be scrutinized and evaluated through outcomes-based research. Health-care agencies and health-related disciplines are already attempting to respond to new trends, through goals and mission, vision, and value statements that reflect a commitment to excellence in patient care through practice founded on education and research. Nursing has thus begun to incorporate research-based practice in the planning process for care delivery (Butler, 1995; Mowinski Jennings, 1995). But is nursing prepared to accept research-based clinical practice, from a global perspective as well as an individual one, as the research plan is interpreted by staff? This question is fundamental to the development of a sustainable research program. Assessment of nurses' views and awareness of research is a critical first step in program development.

Roles and responsibilities of nurses working in hospitals vary with regard to using research and helping to design and conduct studies. Graduate nurses have been identified as key players in articulating the role of nurse as researcher. Clinical nurse researchers (CNRs) prepared at the doctoral level both conduct their own research projects and help develop the research skills of staff nurses by involving them in clinical studies (Knafl, Bevis, & Kirchhoff, 1987). While no consistent approach

has been identified as ideal, conducting rather than using research appears to be the expected role for the CNR. The clinical nurse specialist (CNS) has also been identified as responsible for conducting research; however, constraints imposed by the multifaceted role of a CNS have been identified as barriers to their independently designing and conducting original research (Fraser Askin, Bennett & Shapiro, 1994; Hamric & Spross, 1983). The CNS is ideally situated to analyze the literature, implement change in practice based on research findings, and evaluate outcomes. This process of applying knowledge is referred to as research utilization (Goode et al., 1991).

Nurse administrators are faced with the challenge of providing leadership and support in developing an environment that encourages research-based practice (Spence-Laschinger, Foran, Jones, Perkin, & Bovan, 1993; Tranmer, Kisilevsky, & Muir, 1995). Both structural and human resources are needed to educate nursing staff to become active participants. Stetler (1989) points out that many nursing baccalaureate programs do not focus on use of research. The Canadian Nurses Association's (1990) five-year strategic plan for research recommends that a climate of inquiry be created to facilitate the carrying out and utilization of research in clinical settings. Clinical nurse educators (CNEs) are central to meeting this goal.

Transforming nursing into a profession grounded in research requires an individual commitment to seeing that research activities are central to care delivery and clinical practice (Tranmer et al., 1995). Staff nurses could champion research by becoming involved in clinically relevant studies that have meaningful outcomes for the delivery of care. Staff nurses who are professionally motivated and view research as integral to their work could promote and support nursing research (Sabey & Forker, 1995; Turner & Weiss, 1994).

Integrating the organizational goals of research into practice requires a long-term commitment on the part of all members of a nursing division (Logan & Davies, 1995; Stetler, 1989). They should have access to current literature that focuses on research particular to their clinical specialty and that serves to increase sharing and visibility of findings (Logan & Davies; Wells & Baggs, 1994). For nurses in advanced positions, the value that organizations place on research is reflected in the support they provide for nurses to become involved in studies and the opportunities they provide for nurses to consult with expert resources who will mentor and join research teams (Spence-Laschinger et al., 1993; Wells & Baggs).

Purpose

The purpose of this survey was to obtain baseline data on nurses' attitudes toward research in practice and, within the nursing division, the degree to which staff were either aware of or actively involved in research as part of their work. The specific study goals were (a) to identify nurses' attitudes towards research in practice, (b) to determine what factors were predictive of nurses' attitudes towards research, and (c) to examine the factors that contributed to nurses' use of and participation in research.

Method

A cross-sectional survey design was used. A convenience sample of nurses working in the nursing division at the Victoria General Hospital, a large tertiary-care hospital, was accrued.

Participants

Staff nurses, head nurses, clinical nurse specialists, nurse educators, hospice nurses, expanded-role nurses, and the enterostomal therapy nurse were invited to participate in the survey. Clinical nursing directors and nurses who participated in the research evaluation process for the nursing division were excluded. All head nurses on each of the 30 nursing care/perioperative units were asked to randomly distribute 20 surveys to individual staff nurses in the unit. Staff nurses were included in the study if they were registered nurses and had been actively employed by the nursing division throughout the previous year, beginning January 1, 1994. Employment included full-time, part-time, and casual assignments in the nursing unit. Six hundred surveys were distributed throughout the nursing division; 541 were distributed to staff nurses (as not all units had 20 registered nurses), 31 to head nurses, five to administrative supervisors, four to clinical nurse specialists, two to expanded-role nurses, 13 to nurse educators, three to hospice nurses, and one to the enterostomal therapist. Given the small numbers of specialty nurses, participants were categorized as staff nurses ($n = 541$) or leadership nurses ($n = 59$).

Instrument

The Research Survey, which measures a positive attitude towards research, was selected for the study (Wells & Baggs, 1994). This survey includes a 20-item self-administered attitude scale, which uses a five-

point Likert format with responses ranging from 1 (strongly disagree) to 5 (strongly agree). The scale has been analyzed into three factors: value of research as relevant and useful for patient care; confidence, or the range of skills needed to both use and conduct research; and support, which refers to an individual's perception of organizational factors that enhance research. Coefficient alpha for each factor is reported as value $\alpha = .74$, confidence $\alpha = .82$, and support $\alpha = .68$. Each factor yields a separate score. A total attitude score is not computed. Scores range from 1 to 5, with a higher score being indicative of greater value for research, more favourable attitude, and greater perceived system support (Wells & Baggs).

Four additional questions were included relating to nurses' awareness of research being conducted in their unit by either nurses, physicians, or other health-care professionals. The section was adapted for use in this study by further categorizing responses concerning the conducting of research to include nurses from their unit and nurses external to their unit and to the hospital, and nurses conducting thesis research for university degrees. The level of research involvement, whether past, present, or expectations for the future, was also measured, using a binary-response (yes-no) format. Respondents were asked about four levels of involvement: data collection, participating as research subject, use, and conducting the research.

Results

Characteristics of Participants

An overall response rate of 61% ($N = 366$) was obtained, with 64% ($n = 38$) responding from the leadership group and 61% ($n = 328$) from the staff-nurse group. Eighteen surveys were discarded because of errors or missing responses. A total of 348 surveys (58%) was used in the analysis.

Leadership group. Nurses working in leadership positions at the hospital included head nurses and all specialty or advanced-practice nurses listed above. Average age was 41 years. Most leadership nurses had been practising for 20 years, although they had been employed at the study hospital an average of 18 years. The majority (47%) of the leadership nurses were prepared at the baccalaureate level, 30% at the diploma level. Prior education in research and statistics ranged from 0 to 6. An average of one research and one statistics course had been completed, consistent with the baccalaureate curriculum. Continuing edu-

cation as measured by attendance at research-related conferences ranged from 0 to 4, with an average of one conference attended.

Staff nurses. The mean age of staff nurses was 35 years; most had been practising for 13 years, 10 at the study hospital. For 72%, the highest education was at the diploma level; this percentage was not unexpected, as overall in 1995 the nursing division baccalaureate staff was only 17%, with 4.7% currently enrolled in post-R.N. programs (personal communication, L. Wallace, Clinical Director, August, 1995). Research-related education (research and statistics courses) ranged from 0 to 5 courses. The majority of staff nurses had not taken courses in either research or statistics. They had attended an average of one research-related conference; attendance ranged from none to a total of six within the previous year.

Research Awareness

The nurses surveyed were aware of research currently being conducted in their nursing unit, mainly medical research (83%) and research by nurses from outside their unit (62%). Most were aware that nurses were conducting research but did not know whether the nurses were employed at the study hospital (58%), were from other hospitals (69.5%), or were doing research for theses. Regarding other health-related research activity, 64% did not respond to the question, while only 3% were aware of such research being conducted in their unit.

Of the leadership-group nurses, the majority were aware that medical research (76%) was being carried out, to a lesser extent nursing research (34%). Staff nurses concurred; however, on average staff nurses were more aware of nurses conducting research (49.7%), specifically those external to their unit (63%), than the leadership group (34% and 50%, respectively) (see Table 1).

Research Involvement

Participants were asked about their prior, present, and anticipated future involvement in research. Most of the nurses surveyed reported that they had previously used research findings in their work: leadership group 90%; staff nurses 53%. Many nurses indicated that they had been research data collectors (leadership 68%; staff 48%). In describing their experience with designing and conducting research, leadership nurses reported more participation (48%) than staff nurses (26%). Nurses' present use of research findings had declined when compared to prior use, consistent for both leadership (71%) and staff (30%) nurses.

Table 1

Nurses' Awareness of Who Was Conducting Research on Their Nursing Unit

		Leadership <i>n</i> = 38		Staff Nurses <i>n</i> = 310		Total Group <i>n</i> = 348	
		<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Physician	NR	5	13.2	17	5.5	22	6.3
	NO	4	10.5	34	11.0	38	10.9
	YES	2	76.3	25	83.5	28	82.8
		9		9		8	
Nurses	NR	5	13.2	23	7.4	28	8.0
	NO	2	52.6	13	42.9	15	44.0
	YES	0	34.2	3	49.7	3	48.0
		1		15		16	
		3		4		7	
VGH nurses from outside my unit	NR	5	13.2	27	8.7	32	9.2
	NO	1	36.0	87	28.1	10	29.0
	YES	4	50.0	19	63.2	1	61.8
		1		6		21	
		9				5	
VGH nurses for student thesis	NR	9	23.7	53	17.1	62	17.8
	NO	2	52.6	18	58.1	20	57.5
	YES	0	23.7	0	24.8	0	24.7
		9		77		86	
Nurses from other hospitals	NR	7	18.4	62	20.0	69	19.8
	NO	2	73.7	21	68.7	24	69.3
	YES	8	7.9	3	11.3	1	10.9
		3		35		58	
Nurses from other hospitals for student thesis	NR	7	18.4	62	20.0	69	19.8
	NO	2	71.0	21	69.4	24	69.5
	YES	7	10.5	5	10.6	2	10.6
		4		33		37	
Other	NR	2	55.3	20	64.5	22	63.5
	NO	1	39.5	0	32.9	1	33.6
	YES	1	5.3	10	2.6	11	2.9
		5		2		9	
		2		8		10	
NR = No Response							

Table 2

Nurses' Reported Involvement in Research Activity, Previous to the Survey, Presently, and Considerations for the Future

		Leadership Group <i>n</i> = 38					
		Previous		Present		Future	
		<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
As a data collector	NR	2	5.3	4	10.5	2	5.3
	NO	10	26.3	25	65.8	6	15.8
	YES	26	68.4	9	23.7	30	78.9
As a subject	NR	5	13.2	6	15.8	4	10.5
	NO	16	42.1	29	76.3	7	18.4
	YES	17	44.7	3	7.9	22	71.1
Use findings in practice	NR	1	2.6	0		0	
	NO	3	7.9	11	28.9	1	2.6
	YES	34	89.5	27	71.0	37	97.4
Participate in designing and conducting research	NR	3	7.9	5	13.2	1	2.6
	NO	17	44.7	23	60.5	3	7.9
	YES	18	47.4	10	26.3	34	89.5
		Staff Nurses <i>n</i> = 310					
		Previous		Present		Future	
		<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
As a data collector	NR	7	2.3	19	6.1	22	7.1
	NO	155	50.0	219	70.6	87	28.1
	YES	148	47.7	72	23.2	201	64.8
As a subject	NR	16	5.2	26	8.4	28	9.0
	NO	204	65.8	265	85.5	144	46.5
	YES	90	29.0	19	6.1	138	44.5
Use findings in practice	NR	11	3.5	24	7.7	19	6.1
	NO	136	43.9	192	61.9	51	16.5
	YES	163	52.6	94	30.3	240	77.4
Participate in designing and conducting research	NR	13	4.2	21	6.7	25	8.1
	NO	217	70.0	259	83.5	113	36.5
	YES	80	25.8	30	9.7	172	55.5
NR = No Response							

Participation in designing and conducting research had also declined for both leadership (11%) and staff (10%) nurses. When considering the future, 97% of the nurses in the leadership group reported that they would use research findings, and 90% reported that they would participate in designing and conducting research. Staff nurses also reported that they would increase their use of research findings in future (77%). Staff nurses reported that they were more willing to consider participating in research than previously (55%), but were found to be less likely to participate than those in the leadership group (see Table 2).

Continuing Education in Research

Participants were asked to identify what they considered necessary for them to support research within the nursing division. The leadership group identified consultation on research design ($n = 35$; 92%) and statistics ($n = 33$; 87%) as the priorities, while staff nurses identified time during scheduled working hours ($n = 266$; 86%) and more information on research conducted in their particular specialty ($n = 243$; 78%) (see Table 3).

Table 3 <i>Research-Related Education Required by Nurses to Participate in Research within the Nursing Division</i>			
	Leadership	Staff Nurses	Total
More information on the research process	23	238	261
More information on on research conducted in my specialty area	25	243	268
Consultation on research design	35	194	229
Consultation on statistics	33	188	221
Money for supplies, data collectors, data entry	30	201	231
Time during my scheduled hours	29	266	295
Other	0	15	15

Nurses were asked to identify their research-related learning needs. The leadership group identified critical analysis ($n = 28$; 74%) and use ($n = 27$; 71%) of research. Staff nurses were most interested in education related to research use in clinical practice ($n = 186$; 60%) and the role of research assistant ($n = 120$; 55%).

Participants were asked to identify the journals they read on a regular basis (more than 50% of issues published yearly) and those to which they subscribed. While all nurses registered in the province are members of the Canadian Nurses Association and receive its official publication, *The Canadian Nurse*, only 100 (29%) nurses reported that they regularly read the journal. Few staff nurses subscribed to journals ($n = 38$; 12%). Those in the leadership group appeared to subscribe to journals of clinical relevance to their specialty.

The Research Survey

Reliability. Reliability of the research survey was determined for the total number of respondents ($N = 348$) using Cronbach's alpha. The scores for the three factors were consistent with previously reported values: Factor 1 α research value $\alpha = .78$; Factor 2 α confidence $\alpha = .83$; and Factor 3 – perceived support $\alpha = .67$. Correlation coefficient results revealed that the three factors were only weakly correlated ($r < .36$); however, research value was moderately related to perceived system support ($r = .49$).

Attitudes toward research in nursing. The value of research in clinical practice was highly rated by the nurses. The leadership group indicated a slightly higher research value than did staff nurses ($M: 4.36$ vs. 3.77). Nurses' ability to use or conduct research was moderately rated by both leadership and staff nurses ($M: 3.03$ vs. 3.04). Perceived support from the nursing division for research activities was moderately rated by the leadership and staff nurses ($M: 3.43$ vs. 3.03). To determine whether there were any significant differences among the nurses, a one-way analysis of variance (ANOVA) was performed. Because the role of nurse carries different expectations within the nursing division, they were categorized as staff, head, and specialty nurses (the specialty nurses included clinical nurse specialists, nurse educators, hospice nurses, and the enterostomal therapist). Results indicate a significant difference among the three groups for research value ($F_{2,336} = 15.97$, $p \leq .001$) and perceived system support ($F_{2,336} = 10.69$, $p \leq .001$) but no significant difference for confidence in conducting and using research. The groups were further analyzed using Tukey's Studentized Range Test. Group comparisons indicate, for both research value and per-

ceived system support, a significant difference between staff and head nurses and between staff and specialty nurses, but no significant difference between head and specialty nurses.

In examining the variables that may be predictive of nurses' attitudes towards research in clinical practice, a regression procedure was carried out for each of the three subscales. Results indicate that within the nursing leadership group a combination of their experience with using research finding, level of education, and experience as a data collector explained 19% of the variance in the value nurses placed on research. Research confidence was weakly explained ($\text{Adj } R^2 = .087$) by the combined effect of an awareness of nurses from their units conducting research and previous participation in designing and conducting research. Perceived system support was also weakly explained ($\text{Adj } R^2 = .16$), by presently using research findings, in experience using research findings, and awareness of nurses from their units conducting research.

Factors relating to staff nurses' attitudes towards research differed from those of the leadership group, and had weak explanatory power. Research value was explained ($\text{Adj } R^2 = .16$) by past use of research findings in clinical practice, age, level of education, and experience as a data collector. Confidence was explained by previous participation in design or conducting research, experience as a data collector, and years in nursing ($\text{Adj } R = .14$). Perceived system support was also explained by a combination of factors: nurses from *their* units conducting research, past use of research, and nurses from *other* units conducting research in their nursing unit ($\text{Adj } R^2 = .14$).

Use of research in clinical practice. To determine whether nurses either were currently using research or were involved in designing or conducting research, chi square (χ^2) and odds ratio (OR) statistics were analyzed. Further identification of variables associated with the use of research and participation was achieved using logistic regression analysis.

Nursing roles were found to be strong indicators for using research in clinical practice. Nurses in the leadership group were five times more likely than staff nurses to use research ($\text{OR} = 5.01$). It is interesting to note that despite this differential the nurse's role within the leadership group (head or specialty nurses) was the same (staff nurses and specialty nurses – $\text{OR} = 3.9$; staff nurses and head nurses – $\text{OR} = 3.9$). Education was a strong indicator for using research in clinical practice. Staff nurses with baccalaureates were found to be twice as likely as diploma nurses to use research. In the leadership group, only three had

graduate degrees; therefore, education was categorized as diploma or degree and was not found to be associated with using research in practice ($\chi^2 = .414, p = .52$). Additionally, employment status (full-time, part-time, or casual) was not found to be associated with using research in either sample group.

To identify the factors associated with using research, a logistic regression equation was constructed for the overall nursing division and for the two groups of nurses. First entered into the model were past and present involvement in research, as subjects or data collectors; previous use of research and participation in designing and/or conducting research; and awareness of research being conducted in their nursing units. Added were demographic variables: age, number of years as a registered nurse, years practising at the study hospital, level of education, statistics and research courses taken, and number of research-related conferences attended. A third step was the addition of nurses' value for research, confidence, and perceived system support.

Results indicated that the significant variables associated with staff nurses' use of research in clinical practice were past use of research findings ($\chi^2 = 44.97, OR = 20.0, p < .01$), present involvement in data collection ($\chi^2 = 14.90, OR = 4.04, p \leq .01$), and perceived support within the system for research activity ($\chi^2 = 4.88, OR = 2.0, p = .02$). Nurses who had a bachelor of nursing education were twice as likely to use research in their practice than diploma-prepared nurses ($OR = 1.75$). Leadership group analyses did not identify any variables associated with the use of research in practice.

Participation in designing or conducting research. Within the overall nursing division most nurses were not designing or conducting research ($n = 277$). The leadership group was shown to be four times more likely than staff nurses to participate in research ($OR = 4.6$). This result is not surprising, since some members of the leadership group were required to use research in their work and therefore may have had more opportunities to participate in research activities. The nurse's role was found to be a strong indicator of participation in research ($\chi^2 = 14.14, p < .001$); however, within the leadership group there was no difference proportionally among the specialty nurses and the head nurses.

Education was not found to be associated with research participation within the leadership group; however, when the categories were collapsed to reflect only R.N. and degree preparations, for the total sample education was revealed to be associated with research participation. Nurses with a degree were twice as likely as diploma-educated nurses to participate in research ($OR = 1.98$). Employment status (full-

time, part-time, or casual) was not associated with participation in research, for either group.

To determine the factors associated with nurses' participation in designing or conducting research, a logistic regression equation was constructed by groups of staff nurses and leadership nurses, with variables entered into the model as previously described. Staff nurses' present involvement in designing and conducting research was found to be associated with four variables: past participation in designing and conducting research ($\chi^2 = 19.75$, $OR = 9.62$ $p < .01$), number of research courses taken ($\chi^2 = 5.87$, $OR = 2.45$ $p = .01$), present involvement in data collection ($\chi^2 = 2.98$, $OR = 3.47$ $p = .02$), and number of statistics courses taken ($\chi^2 = 4.18$, $OR = 3.29$ $p = .04$). Within the leadership group, university preparation at the baccalaureate ($\chi^2 = 4.68$, $OR = 12.19$ $p = .031$) or masters level ($\chi^2 = 4.31$, $OR = 27.77$ $p = .03$) were the only variables associated with research participation.

Discussion

The majority of participants in this survey had no formal education in research or statistics. Those who did report having taken courses had done so in conjunction with baccalaureate requirements. Regardless of education, however, nurses valued research highly and were shown to believe there was strong support within the nursing division for research activity. Educational background was found to be a factor in nurses' lack of confidence in their ability to participate in research, which suggests that advanced education in the research process may be required. It is interesting to note that nurses who were required to use research in their work reported a similar lack of confidence in their research abilities. This finding underscores the need to examine role expectations and linkages between research obligations and conducting research in clinical practice.

A discrepancy was seen between nurses' lack of knowledge about the research literature and their reported participation in and use of research. This may be explained by their perceptions of what it means to be involved in research. For some it may have meant using research-based policies in their work; for others, helping investigators to access client populations in the nursing units. The fact that the subjects identified most components of the research process as educational ones suggests that their research role has been a supportive one. This raises the question of how nurses can become actively involved in learning about and using the research process.

Most participants did not represent themselves as regularly reading health-related journals, and those journals identified as the most frequently read do not usually publish research. This finding is consistent with other reports from hospital-based practice settings (Logan & Davies, 1995). Staff nurses identified time for research activities as a barrier to their participation. This limitation may also affect their ability to leave the clinic and spend time in the library reading or conducting literature searches. How can staff nurses be ensured availability of appropriate research articles and reference material? No participants identified the formation of a journal club as a priority, and only 18% of staff nurses included this idea in combination with other topics, which suggests a need for innovative ways to help nurses keep current in their reading and to be introduced to research literature. The education topic that the nurses identified most as their key area of interest was using research. The leadership group identified a further interest: critically analyzing research. Nurses in leadership positions may view this skill as necessary in disseminating information and lobbying for evidence-based practice.

The nurses showed they were very much aware of the research activity taking place in their environment. Most of the research being conducted in the study hospital related to medical research, in which nurses were involved to the degree of facilitating the work of the investigators. This may be the cause of the overwhelming interest staff nurses expressed for continuing education to train for the position of research assistant or data collector. The leadership group was also keenly interested in learning more about such a role, but this could reflect a desire to develop collaborative relationships between nurses working in research and clinical practice settings to support nursing research activities.

Consistent with previous research findings, nurse characteristics of age, education, and experience contributed significantly to research utilization (Wells & Baggs, 1994). Additionally, nurses' perceived support from the nursing division was a factor in their using research in their practice. These issues could be addressed by creating an environment conducive to individual nurses using research in their work, an environment identifying the expectations of and opportunities for all nurses to be actively involved in research. CNR and CNS roles have been identified as key to meeting such a goal (Fraser Askin et al., 1994). The struggle to meet the demands of advanced nursing roles may be reflected in the leadership nurses' low scores for confidence in their research abilities, as compared to their value for and perceived support for research.

Conclusion

This survey was conducted with a view to assessing nurses' attitudes towards research as a component of their clinical practice. The desired outcome was meaningful information about how nurses view research and their degree of involvement in research activities within the organization, as a basis for developing a strategic plan for nursing research.

Based on the survey results, a guiding framework for such a strategic plan must consider nurses' involvement in research from two perspectives. The first should address nurses' supportive activities for research, primarily direct services to individual investigators conducting studies in a nursing unit. The degree of support, the level of decision-making for resource allocation, and the impact of such activity on nursing should be clarified and measured. The second concerns using the research process within nursing, specifically the ability of nurses to actively participate in using research findings, identifying researchable questions, and contributing as members of a research team.

The survey results indicate that the staff valued research and perceived the nursing division to be supportive of research activity. If the nursing division is committed to designing and conducting studies, then exposure to the resources of nurses with advanced degrees who are confident of their research abilities is critical to a strategic plan. The nurses indicated an interest in becoming involved in all aspects of research, indicating that the nursing division has developed an environment for nursing research. The subjects also identified the educational requirements necessary for research endeavours. The combined effect of education and exposure to knowledgeable resources will increase nurses' confidence. Interaction of nursing administration, education, and practice is central to the development of a strategic plan for nursing research. The factors identified as key to nurses' use of and participation in research – for both leadership and staff nurses – are valuable tools for drawing up the overall plan. Mentoring, role modelling, and developing programs aimed at research utilization are also critical elements of such a strategic plan for nursing research.

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Factors Affecting Acute-Care Nurses' Use of Research Findings

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La présente étude décrit la perception qu'ont les infirmières soignantes du soutien que l'hôpital manifeste pour la recherche, et ses attentes par rapport à la recherche. On traite aussi des relations entre les facteurs organisationnels, les facteurs individuels et l'utilisation de la recherche que font les infirmières soignantes. Pour divers groupes d'infirmières, on a comparé ces facteurs entre le niveau de formation et la taille de l'hôpital. On a obtenu d'une association provinciale d'infirmières un échantillonnage aléatoire stratifié de 450 infirmières. Cent quatre-vingt trois infirmières ont rempli le sondage envoyé par courrier. L'utilisation de conclusions de recherches spécifiques a été reliée aux facteurs organisationnels et était conforme aux études précédentes. La perception qu'ont les infirmières de leur utilisation générale de la recherche a été liée aux caractéristiques individuelles telles que l'intérêt pour la recherche et les attentes qu'on a de l'utilisation de la recherche. Cette perception atteint un niveau élevé, quelle que soit la formation. La perception qu'ont les infirmières du soutien organisationnel et de ce qu'elles en attendent, était très différente, dépendamment de la taille de l'hôpital. L'étude montre que le contexte organisationnel a son influence mais que la valeur que les infirmières accordent à l'utilisation de la recherche, l'intérêt qu'elles lui portent et leurs attentes par rapport à celle-ci peuvent modifier cette influence. Pour accroître la pratique fondée sur la recherche, il faudra prêter attention au contexte organisationnel de la pratique.

This study describes staff nurses' perceptions of hospital support for research and their expectations for research; and relationships between organizational factors, individual factors, and staff nurses' use of research. These factors were compared for groups of nurses by education level and hospital size. Stratified random sampling of 450 nurses was obtained from a provincial nurses' association. The mailed survey was completed by 183 nurses. Use of specific research findings was related to organizational factors and was congruent with earlier studies. Nurses' perceptions of their general use of research were related to individual characteristics such as interest in research and expectations to use research, which scored high regardless of educational level. Nurses' perceptions of organizational support and expectations differed significantly according to hospital size. This study suggests that the organizational context is influential, but nurses' value of, interest in, and expectations to use research may mediate this influence. Enhancing research-based practice will require attention to the organizational context of practice.

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Nursing research aims to improve the quality and cost-effectiveness of patient care. Research-based nursing practice is essential for professionalism, accountability, the delivery of quality care, and cost-effectiveness (Bircumshaw, 1990). If nursing is to become research-based, the factors that influence research use must be understood. Studies of these factors have focused on the quality of available research and on the characteristics of individual nurses. The results are inconclusive, but the studies suggest that the organizations in which nurses work may be influential. If this is the case, then strategies for organizational change must be added to those for improving the quality of research and for improving the individual nurse's ability to use research. An understanding of the influence of organizational support and expectations about research use will assist the nursing profession in developing appropriate organizational strategies. The purpose of this study was to describe staff nurses' perceptions of hospital support and expectations for research, and to examine relationships between nurses' perceptions of these factors, individual characteristics, and nurses' reported use of research in practice.

Theoretical Framework

A framework developed and modified by Crane (1989) specifies that organizational and individual factors influence the use of research, and it suggests that there are relationships among these factors (Figure 1). Crane suggests that the characteristics of research-based knowledge, and the personal and professional characteristics of the nurse, contribute to the likelihood that the nurse will change (individual change factors). The organization's propensity for change (organizational change factors), which is influenced by the context, impacts in turn on the use of research to the extent that organizational change factors can overwhelm individual change factors.

The organizational context variables considered in this study were hospital size and research-related infrastructures such as policies, resources, and personnel. Organizational change factors included nurses' perceptions of what key nursing personnel expected from research-based practice, how the organization values research, and the research climate. Individual characteristics included the nurses' education and research experience and demographic variables. Finally, the individual change factors included how the nurses themselves value research, their research interest, and their expectations in using the research. Using Crane's framework, these variables were viewed as predictors of research utilization outcomes (Figure 1). The outcomes con-

sidered were nurses' views of their own general use of research and their use of 10 specific findings identified in earlier studies (Brett, 1987; Coyle & Sokop, 1990).

Literature Review

Each element in Crane's framework has been investigated. Studies of the characteristics of research-based knowledge suggest that availability of findings, methods of communicating the findings, and the type of journals read significantly influence research use (Brett, 1986, 1989; Champion & Leach, 1989; Coyle & Sokop, 1990; Linde, 1989; Miller & Messenger, 1978). However, some studies (Brett, 1987; Coyle & Sokop; Kirchoff, 1982) show that knowing about research does not determine

Figure 1

Current Study Variables (bold) within the Conceptual Framework

Characteristics
of Research-based
Knowledge

Personal and
Professional
Characteristics

- **education**
- **research experience**

Individual
Change Factors

- **value**
- **interest**
- **expectations**

Organizational
Change Factors

- **value**
- **expectations**
- **climate**

Organizational
Context

- **size**
- **infrastructures**

Research
Utilization
Outcomes

- **general use**
- **use of specific findings**

its use, and that some nurses use research findings without being persuaded of their value; the nature and dissemination of knowledge are therefore insufficient to explain research use.

Most studies of research use in nursing focus on the individual characteristics of nurses. Three Canadian studies of attitudes toward research found supportive attitudes toward research, in Ontario among staff nurses (Alcock, Carroll, & Goodman, 1990), and in British Columbia among key people responsible for research in hospitals (Clarke, 1992) and faculty in nursing schools (Clarke & Joachim, 1993). In the only reported study of the effect of attitude, attitude toward research related significantly to self-reported use of research findings (Champion & Leach, 1989). In addition, findings of various levels of persuasion about the usefulness of innovations (Brett, 1987; Coyle & Sokop, 1990) suggest that attitudes about research are important.

The educational background of nurses has received considerable attention. No significant relationships have been found between use of research and the nurse's type of education or number of degrees held, participation in continuing education or research courses, or whether currently working toward a degree (Brett, 1987; Coyle & Sokop, 1990; Crane, 1989; Ketefian, 1975; Kirchoff, 1982; Winter, 1990). Attending conferences, having research responsibilities at work, and reading specific journals relate significantly to the use of findings (Brett, 1987; Coyle & Sokop; Crane; Kirchoff). However, the importance of these findings is obscured by conflicting results regarding the influence of the source of knowledge (Winter) and the amount of time spent reading (Brett, 1987; Coyle & Sokop; Kirchoff), as well as the finding that less than 71% of nurses are interested in reading (Alcock et al., 1990).

Other individual characteristics, such as years of nursing experience (Champion & Leach, 1989; Coyle & Sokop, 1990; Winter, 1990), professional membership (Kirchoff, 1982), experience of change, urban orientation, influence over others (Crane, 1989), age, socioeconomic status, and clinical specialty (Winter) were not significantly related to research use. Clearly, individual characteristics do not sufficiently explain the use of research in nursing.

Nurses have identified organizational factors as the greatest barriers to using research (Funk, Champagne, Wiese, & Tornquist, 1991). The influence of organizational factors on research use has been studied, but most such inquiry has been limited to secondary consideration within studies of the characteristics of individual nurses (eg., Brett, 1986; Champion & Leach, 1989; Coyle & Sokop, 1990; Crane, 1989; Funk et al.; Kirchoff, 1982; Linde, 1989). Hospital size (Brett, 1987; Kirchoff); and

research support mechanisms (Brett, 1989; Crane) have been studied, but results are inconclusive. Other studies (Champion & Leach; Coyle & Sokop; Funk et al.; Linde) each consider different organizational variables, thereby making comparison difficult. Perception of unit policy is the only organizational characteristic consistently shown to influence the use of research (Brett, 1986; Coyle & Sokop; Kirchoff). Perception of the existence of a policy on a specific practice correlated with use of that practice, regardless of whether an actual policy did exist.

Recent Canadian studies (Alcock, et al., 1990; Clarke, 1992; Clarke & Joachim, 1993) describe organizational infrastructures and expectations for research from various perspectives. Alcock et al. surveyed staff nurses regarding research climate and found that only 41% of nurses thought they were encouraged to question practice, while 44% thought the nursing administration was supportive and 48% thought they were encouraged to develop effective and efficient practice. Clarke found that personnel responsible for research in health-care agencies perceived greater support by their organizations. For example, 96% of research personnel in hospitals thought that staff nurses were encouraged to question practice. However, infrastructures and support strategies for research-related activities received low ratings from respondents in all settings. To date, no research on the influence of these organizational factors on research-based practice has been reported. This study therefore examined the relationship of organizational support and expectations for research to the use of research findings from the perspective of staff nurses.

Research Questions

The following questions were posed:

1. What are the nurses' values for, interests in, and experiences with research?
2. What are the nurses' expectations of themselves for using research findings?
3. What are the perceived organizational expectations to use research findings?
4. What is the perceived organizational support for using research findings?
5. What is the reported level of research use?
6. What are the differences between perceived organizational expectations and staff nurses' expectations of themselves for using research findings in nursing?

7. What are the relationships between perceived organizational expectations and staff nurse expectations of themselves and the use of research findings?
8. What is the relationship between the nurses' perceptions of organizational support for research utilization and use of research findings?

Method

A stratified random sample ($n = 450$) of registered nurses was selected from all 7,772 staff nurses working in medical/surgical and critical-care areas of acute-care hospitals British Columbia. The Registered Nurses Association of B.C. (RNABC) database was stratified by education level and by hospital size, and a random sample was drawn. The nurses were surveyed by mail and consent to participate was assumed by their returning the completed survey. Anonymity was assured because the RNABC selected the sample and mailed the survey packages. Following two reminders, 183 nurses (42%) had responded.

The Research Use in Nursing Practice instrument designed by Alcock et al. (1990) and modified by Clarke (1991) was used. The instrument was modified by adapting the wording for use by staff nurses and adding appropriate demographic questions. Personal and professional characteristics assessed included the nurse's level of education and whether the nurse had had 18 research-related experiences, such as completing questionnaires, collecting data, or taking research courses. Individual change factors were measured by levels of agreement/disagreement with six statements about their value for research, 10 statements about their interest in research, and six statements about their expectations of themselves to use research. The organizational context was addressed by asking about the existence of 27 research supports (e.g., research policies and committees, release time for research, research responsibilities in job descriptions) in addition to hospital size. Organizational change factors were measured by levels of agreement/disagreement with six statements about nurses' perceptions of the nursing department value for research, six statements about their perception of the expectations others hold of them to use research, and 11 statements about the research climate in their organization. The climate scale included statements about encouragement, support, and recognition for using research. Internal consistency of the above subscales ranged from .79 to .92.

Research use was measured in two ways. Nurses rated their general use of research on 10 statements, from "not at all" (1) to

"always" (4). Internal consistency was 0.87. Nurses rated whether they used 10 specific findings, from "never" (1) to "always" (3) – or "not applicable," if the finding was not appropriate for their area of practice. The items (e.g., mutual goal-setting, providing planned preoperative teaching, using the dorsogluteal injection site) had been used in earlier studies (Brett, 1987; Coyle & Sokop, 1990). Internal consistency was 0.87. Content validity of the total instrument was tested through peer review. The instrument was also pilot-tested and revised.

Descriptive statistics were used to describe the levels of each of the individual and organizational factors. *T*-tests were used to detect the differences between nurses' own expectations of themselves to use research and their perceptions of the expectations held by head nurses and directors of nursing. Multiple analysis of variance (MANOVA) was used to detect differences among groups by educational level and hospital size, and post hoc analysis (Tukey's) was carried out when differences were significant. Correlation coefficients were calculated to identify relationships between variables.

Results

The sample comprised 83 (45%) diploma nurses and 98 (54%) baccalaureate nurses (two nurses did not report their education level). The nurses also represented hospitals of different sizes: 59 worked in small hospitals (<250 beds), 67 in medium-sized hospitals (250-499 beds), 54 in large hospitals (>500 beds), and three did not report hospital size. There were therefore 25, 33, and 24 diploma nurses and 33, 33, and 30 baccalaureate (BSN) nurses, from small, medium, and large hospitals. The sizes of these groups were sufficiently similar to permit use of analysis of variance (Stevens, 1990).

Fifty-five (30%) of the nurses indicated that they worked in medical areas, 33 (18%) in surgical areas, 27 (15%) in medical/surgical areas, and 66 (36%) in critical-care areas. The sample was almost evenly divided between nurses who worked full time (49%) and those who worked part time (51%). The majority of the sample had graduated less than 10 years previously (56%), with the years since graduation ranging from 0 to 34 years ($M = 13.9$; $SD = 9.3$) for diploma nurses and from 0 to 36 years ($M = 8.2$; $SD = 6.8$) for BSN nurses. Diploma nurses tended to be older ($M = 38$ years; $SD = 9.3$) than BSN nurses ($M = 34.5$ years; $SD = 6.8$).

Although a random sample was used, comparison with other databases (Canadian Centre for Health Services and Policy Research, 1993;

Table 1*Summary of Descriptive Statistics and MANOVA for All Study Variables*

	Education					Hospital Size				
Factor (possible range)	Diploma <i>M</i> (<i>SD</i>)	BSN <i>M</i> (<i>SD</i>)	<i>F</i> Ratio (<i>df</i> =1)	Small <i>M</i> (<i>SD</i>)	Medium <i>M</i> (<i>SD</i>)	Large <i>M</i> (<i>SD</i>)	<i>F</i> Ratio (<i>df</i> =2)			
Individual Factors										
Research Experience (0-18)	4.2 (2.7)	7.1 (3.4)	40.05**	6.0 (3.5)	5.1 (2.3)	6.2 (3.0)	1.10			
Value for Research (6-24)	19.7 (2.9)	20.7 (5.2)	5.11*	20.5 (3.1)	20.2 (2.9)	20.2 (3.0)	0.43			
Interest in Research (10-40)	30.8 (5.2)	31.7 (5.2)	0.01	31.3 (4.0)	31.5 (5.4)	31.4 (5.0)	0.33			
Expectations to Use Research (6-24)	18.3 (3.0)	18.8 (3.1)	2.01	18.9 (2.6)	18.4 (3.2)	18.2 (3.6)	0.66			
Organizational Factors										
Infrastructure (0-27)	5.7 (5.6)	8.0 (6.5)	0.06	4.4 (6.2)	7.0 (5.6)	10.9 (6.8)	2.41**			
Research Climate (11-44)	26.8 (7.0)	25.2 (6.7)	1.07	21.4 (6.4)	25.5 (6.2)	29.1 (5.8)	20.30**			
Head Nurse Expectations (6-24)	17.8 (4.4)	17.7 (3.9)	0.59	16.8 (4.1)	18.5 (3.0)	12.8 (2.9)	3.03**#			
Nursing Director Expectations (6-24)	17.8 (4.4)	17.7 (3.9)	0.45	15.9 (3.2)	18.1 (3.0)	18.6 (3.2)	5.20**			
Nursing Department Value (6-24)	19.8 (3.1)	19.3 (3.6)	0.58	18.3 (3.9)	19.9 (2.9)	20.3 (3.1)	4.96**			
Research Use										
General Use (10-40)	22.6 (4.9)	22.9 (4.9)	1.87	23.2 (5.7)	22.5 (4.9)	22.5 (4.0)	0.29			
Use of Specific Findings (1.0-3.0)	2.2 (0.4)	2.2 (0.4)	0.06	2.1 (0.4)	2.1 (0.4)	2.2 (0.3)	2.40			
* <i>p</i> = > 0.05; ** <i>p</i> = > 0.01; # significant interaction effect										

Kazanjian, Pulcins, & Kerluke, 1992; Statistics Canada, 1991) revealed that stratification and differences between responders and non-responders led to a final sample that was more representative of BSN nurses, nurses who worked part time, and those who worked in medical/surgical areas than of the population of staff nurses in B.C. acute-care hospitals. BSN nurses tended to be younger, as we have seen, and to have graduated more recently than diploma nurses, but the sample was similar in gender and age to the underlying population.

The results will be reported in terms of each of the variables. The mean scores and results of analysis of variance are summarized in Table 1.

Individual Factors

The individual factors were comprised of nurses' education and research experience and the change factors of value for, interest in, and expectations to use research.

Research experiences, values, and interests. The nurses indicated that they had had from zero to 17 out of a possible 18 research experiences ($M = 5.8$; $SD = 3.3$). Completing questionnaires was the most common. The next top four experiences were attending conferences at which research findings were presented, attending research conferences, taking research courses, and taking statistics courses. The remaining 13 were indicated by less than 50% of the nurses. There was a significant difference by education ($F = 40.05$; $df = 1$; $p = .00$), with BSN nurses having more research experience for all but one category. There was no significant difference by hospital size and no interaction effect.

The scale of six statements about the value of research in the nursing profession ranged from six (strong disagreement with all value statements) to 24 (strong agreement with all statements). The scores ranged from 12 to 24 ($M = 20.3$; $SD = 2.99$). For the five statements regarding the value of research in enhancing nursing decisions, interventions, and public accountability, 89-98% of the nurses agreed or strongly agreed. The sixth statement, about the value of research in enabling nurses to use resources more efficiently, received less support, with only 77% of nurses agreeing. The value scores were significantly higher for BSN nurses than for diploma nurses ($F = 5.11$; $df = 1$; $p = .03$). There were no significant differences by hospital size and there was no interaction effect.

The nurses rated their level of agreement with 10 statements regarding their interest in research-related activities. The possible score

ranged from 10 (strong disagreement with all interest statements) to 40 (strong agreement with all statements). The scores ranged from 10 to 40, ($M = 30.7$; $SD = 5.9$). Very few nurses had a score of less than 24, suggesting agreement by most nurses. Most individual statements also received a high level of agreement. Interests directly related to nursing practice, such as finding answers to specific nursing problems and using research results to change practice, received the highest level of agreement. The least supported area was conducting research outside of work assignments. There were no significant differences in interest scores among the groups by hospital size or education.

Nurses' expectations for using research findings. The nurses were asked about their level of agreement with six statements concerning expectations they held regarding their own use of research in nursing. The possible score ranged from six (strong disagreement with all expectations) to 24 (strong agreement with all expectations). The range for the sample was 6-24 ($M = 18.2$; $SD = 3.6$). Levels of agreement varied among the six expectations. Most nurses agreed or strongly agreed that they themselves expected to "critically question the effectiveness of daily nursing practice" (90%) and to "apply research findings to clinical practice" (93%). "Promoting a climate that supports colleagues' research" received 85% agreement (agree/strongly agree), and collecting data for nursing research received 87% agreement. However, conducting research and being involved with collecting data for non-nursing research received less agreement – 50% and 56%, respectively. There was no significant difference in expectations of self by education or by hospital size.

Organizational Factors

The organizational context was described by hospital size and research infrastructure supports; organizational change factors were described by perceived expectations of key personnel, nursing department value for research, and research climate.

Perceived organizational expectations to use research findings. Organizational expectations were measured by asking nurses to express their level of agreement about the degree to which they thought their head nurse and nursing director held particular expectations. The statements were the same as those used to rate self-expectations. The nurses perceived the expectations of their head nurses ($M = 17.8$, $SD = 3.4$; range 6-24) and their director of nursing ($M = 17.6$; $SD = 4.1$; range 6-24) to be similar. There was a significant difference among the perceived

expectations of head nurses from hospitals of different sizes ($F = 3.03$; $df = 2$; $p = .05$) and an interaction effect between hospital size and level of education ($F = 3.39$; $df = 1$; $p = .04$), although no differences were found between educational levels. This demonstrates that BSN nurses in medium-sized and large hospitals thought that head nurses' expectations were higher than did BSN nurses in small hospitals, whereas diploma nurses in medium-sized hospitals thought head nurse expectations were higher than did diploma nurses in either small or large hospitals. For perceived expectations of nursing directors, a significant difference was seen among nurses from hospitals of different sizes ($F = 5.20$; $df = 2$; $p = .01$), but there was no interaction effect and no difference between educational levels.

Perceived level of organizational support for using research findings.

Organizational support for research was measured in three ways. The nurses were asked to express their level of agreement with six statements about the value of research within the nursing department. They were asked to express their level of agreement with 11 statements regarding the research climate in their organization. They were also asked to identify the research-related supports available in their organization.

The statements regarding the value of research within the nursing department were the same as those that the nurses responded to when rating their own value for research. The scores ranged from 8 to 24 ($M = 19.5$; $SD = 3.3$). Most nurses agreed or strongly agreed with most statements. Scores were lower in small hospitals, higher in medium-sized hospitals, and highest in large hospitals, with a significant difference among hospital sizes ($F = 4.96$; $df = 2$; $p = .01$) but no difference between educational levels and no interaction effect.

The 11 statements regarding the research climate included questions about encouragement and recognition of nurses, and interest in research by others. The possible score ranged from 11 (strong disagreement with all statements) to 44 (strong agreement with all statements). The scores ranged from 11 to 44 ($M = 25.9$; $SD = 6.8$). Most were between 21 and 30. The climate scores were low for small hospitals, higher for medium-sized hospitals, and highest for larger hospitals, the differences being significant ($F = 2.41$; $df = 2$; $p = .00$), but there was no significant difference between educational levels and no interaction effect.

The nurses' perceptions of infrastructures for research were measured by asking them to identify which of 27 infrastructures were avail-

able in their hospitals. The possible score ranged from 0 (no supports) to 27 ("yes" to all supports). Over 33% of all responses were "don't know." The scores ranged from 0 to 27 ($M = 7.2$; $SD = 6.3$). Over half of the nurses identified fewer than six of the 27 possible infrastructures. The most frequently identified supports were library facilities and ethics committees, which were identified by 119 and 112 nurses, respectively. Ethics committees identified were not necessarily related to research, as only 64 nurses identified research review committees and only 18 nurses identified combined research and ethics committees. All remaining infrastructures were identified by fewer than half of the nurses. There was a significant difference in perceived number of infrastructures among hospitals of different sizes ($F = 2.41$; $df = 2$; $p = .00$), with larger hospitals having a significantly greater mean number (10.9) than medium-sized (7.0) or small ones (4.4). The BSN group tended to report a higher number of infrastructures ($F = 0.06$; $df = 1$; $p = .08$).

Reported Level of Research Utilization

Research utilization was measured in two ways: the nurses were asked first to rate their general use of research and then to rate their use of specific research findings. Each of 10 statements related to general use of research were rated on a four-point scale, from "not at all" to "sometimes" to "frequently" to "always." The possible score ranged from 10 ("not at all" for all statements) to 40 ("always" for all 10 statements). Scores ranged from 10 to 38 ($M = 22.7$; $SD = 4.91$). All statements were rated at least "sometimes" by at least 80% of the nurses. The most strongly supported statement regarded communicating concerns about the effectiveness of practices to colleagues. The least supported statement regarded the use of research articles to support questioning practice and the identification of hospital policies based on research. No significant differences were seen by education or hospital size.

The nurses were also asked to rate whether they used 10 specific findings – "never" = 1, "sometimes" = 2, "always" = 3, or "not applicable." Three of the findings were rated "not applicable" by over 30% of nurses, and these responses were excluded when percentage of use and the overall scores were calculated. The score for the use of specific findings was the average score of applicable practices (range 1 - 3). The mean score was 2.15 ($SD = 0.36$). Use varied with the specific finding. With one exception (catheter clamping), each finding was used at least sometimes by 50% of the nurses. Giving sensory information before diagnostic tests was used most frequently (at least sometimes by 96%

of the nurses to whom it applied). Mutual goal-setting and giving sensory information before surgical procedures were also used at least sometimes by 95% of nurses. An average of 77% of nurses used the findings at least sometimes. Use of specific findings was not significantly different by education or hospital size.

Difference between Perceived Organizational Expectations and Staff Nurses' Expectations

T-tests were used to test the difference between the nurses' expectations of themselves and their perceptions of the expectations of key individuals in the organization. Their expectations of themselves to use research were significantly higher than their perceptions of head nurses' expectations ($t = 2.381$; $p = .02$) and directors' expectations ($t = 2.60$; $p = .01$).

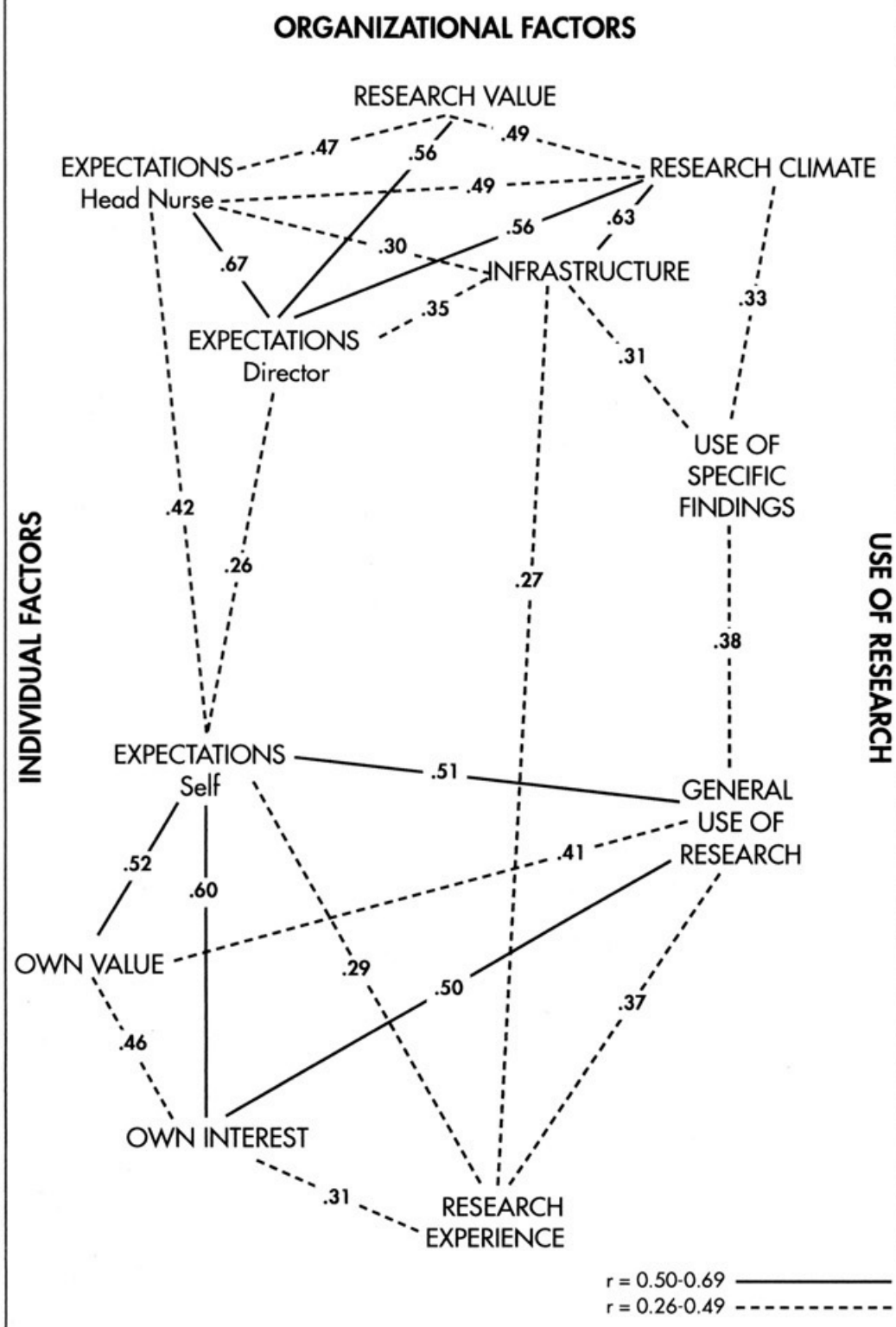
Relationships between Organizational and Staff Nurse Expectations and Use of Research

Pearson's Correlation Coefficients were calculated to describe relationships between expectations (of head nurse, director, and self) and use of research (general and specific). Munro and Page's (1993) classification was used to interpret the strength and to judge the practical significance of the correlations. They consider .26 - .49 a low correlation, .50 - .69 moderate, .70 - .89 high, and .90 - 1.00 very high. Correlations below .26 are not considered significant and thus were not included in the interpretation. All correlations above .26 were statistically significant at $p = .001$ or higher. The correlations are shown in Figure 2.

The relationship between perceived expectations of the head nurse and perceived expectations of the director was moderate ($r = .67$). The relationship of the nurse's own expectations to perceived head nurse expectations was moderate ($r = .42$), to perceived director expectations low ($r = .26$). The correlation between the nurses' reported general use of research and use of specific findings was moderate ($r = .48$). There was no significant correlation between the expectations perceived to be held by head nurses or nursing directors and the general use of research or the use of specific findings. The nurses' own expectations correlated moderately with their own reported general use of research ($r = .51$), but did not correlate with their reported use of specific findings.

Figure 2

Bivariate Correlations among Organizational and Individual Factors and Research Utilization Outcomes



Relationship between Nurses' Perceptions of Organizational Support and Use of Research

Correlations were also calculated to describe relationships between organizational support and the use of research. Two supports (climate and infrastructures) correlated with the use of specific findings ($r = .33$ and $.31$, respectively), but none correlated with general use.

In order to examine relationships within organizational and individual factors and research use, further bivariate relationships were explored. The individual change factors were interrelated ($r = .46 - .60$) and correlated with the general use of research as reported by the nurses ($r = .41 - .51$). The organizational factors (nursing department value for research, research climate, and infrastructures) were also interrelated ($r = .47 - .67$). The climate and infrastructures, which were correlated with the use of specific findings, were correlated with each other ($r = .63$) and with all of the other organizational characteristics ($r = .49 - .56$ and $r = .29 - .56$, respectively). The organizational factors were not related to individual factors except for a correlation between the nurses' own expectations and the perceived head nurses' expectations, and a correlation between research experience and reported infrastructures. Use of specific findings was related only to organizational factors, whereas general use of research was related only to individual factors. The two measures of research use were also correlated ($r = .38$).

Discussion

Both diploma and BSN nurses reported high values for research and interest in research, and high expectations of themselves to use research, although BSN nurses indicated significantly greater value for research. Although research experience was low for the entire sample and was not significantly different by hospital size, BSN nurses had significantly more research experience, especially in attending conferences and taking courses. The findings regarding individual factors of value for research and experience and interest in research were remarkably similar to those of previous studies (Bostrom, Malnight, MacDougall & Hargis, 1989; Clarke, 1992; Clarke & Joachim, 1993), although Alcock et al. (1990) found greater differences between educational levels. None of the individual characteristics or change factors was significantly different by hospital size.

In contrast, all of the organizational factors differed significantly by hospital size but not by education level. All organizational factors were reported higher according to hospital size, with the exception of views

of head nurses' expectations, which showed a significant interaction effect between hospital size and education level. The number of infrastructures for research identified was generally small, and the nurses' perceptions of the organizational research climate scored low. Nurses reported high expectations on the part of their head nurses and directors although the nurses perceived them to be significantly lower than their own expectations of themselves.

The reported levels of use of specific findings were comparable to or higher than those of previous findings (Brett, 1987; Coyle & Sokop, 1990; Winter, 1990), but were difficult to evaluate in terms of clinical importance. The use of specific findings varied with the specific practices, but on average 77% of the nurses used the practices at least "sometimes." As there is no standard, the adequacy of this level is difficult to judge.

The use of specific findings did not differ by education or hospital size. The strongest factors influencing the use of specific findings were organizational climate and infrastructures. This is congruent with earlier findings that perceptions of unit policy influence practice (Brett, 1986; Coyle & Sokop, 1990; Kirchoff, 1982). Other organizational factors, including expectations, were related to climate and infrastructures, but not directly to the use of findings. None of the individual factors was related to the use of specific findings, supporting the idea that organizational factors are more influential.

The levels of general use of research reported by nurses in this study were moderate, with no significant differences by hospital size or education. Nurses' perceptions of their general use of research have not been widely reported and were shown in this study to differ from the use of specific findings that has been commonly measured and, understandably, to relate to individual characteristics of research interest, value, experience, and expectations.

Consistent with previous studies (Brett, 1987; Crane, 1989; Coyle & Sokop, 1990; Ketefian, 1975; Miller & Messenger, 1978; Winter, 1990), this investigation found no difference in the use of specific findings between educational levels. The limited effect of education may indicate that the research education that nurses receive is insufficient to have an impact or that the methods of teaching and focus of research education have not been effective. It may also indicate that organizational factors limit the effectiveness of the individual nurse and his or her education.

The relationships between organizational and individual factors and research utilization outcomes were consistent with Crane's (1989) conceptual framework. The individual change factors were interrelated and correlated with nurses' reports of their general use of research. The organizational factors were also interrelated, and climate and infrastructures correlated with the use of specific findings. The organizational factors were not related to individual factors, except for a correlation between the nurses' own expectations to use research and the perceived head nurses' expectations, and between research experience and reported organizational infrastructures. These findings suggest that the head nurses' expectations may have some influence, and that research experience may increase awareness of research supports. The use of specific findings was related only to organizational factors, whereas the second measure of research use (general use of research) was related only to individual factors. The two measures of research utilization were also correlated. Although organizational factors varied by hospital size and correlated with the use of specific findings, the use of specific findings did not vary by hospital size: these findings were interpreted as suggesting that individual factors may mediate the influence of organizational factors. This interpretation departs slightly from Crane's conclusion that organizational factors overwhelm individual factors.

Conclusions

Although this study was limited by the low response rate of 42%, the fact that organizational factors were measured from the nurses' perspective, and the fact that research use was self-reported, the following conclusions may be reasonable. Nurses' interest in research and their expectations of themselves to know and use research findings transcend educational level and hospital size. Nurses are especially interested in learning about research results relevant to their area of work, finding answers to specific nursing problems, and using research results to change their own practice. Nurses expect to use research and to critically question their practice, as well as to apply the findings to their practice. BSN nurses seem to hold higher value for research and they have more research experience than diploma nurses. Nurses' values for, interests in, experiences with, and expectations to use research seem to influence their perceived general use of research. These characteristics do not appear to directly influence the use of specific findings, but may mediate the influence of the organization.

Educational level does not significantly influence the levels of general use of research or the use of specific findings.

Nurses perceive the organizational climate and support for research to be low, especially in small hospitals. They perceive the organizational expectations for the use of research to be fairly high, but this perception varies with hospital size and is lower than nurses' expectations of themselves. It appears that nurses think they are expected to use research, but do not think that they are supported in doing so.

Conclusions about the impact of the organizational context and change factors are not easily drawn. While organizational size does not seem to influence nurses' individual characteristics or use of research, organizational supports and expectations are greater in larger hospitals. Organizational climate and support do not appear to be related to general use of research, but are related to the use of specific findings. These were the only factors that correlated with the use of specific findings, suggesting that organizational climate and support are most influential.

Conclusions regarding research utilization outcomes are also difficult to reach. Nurses' general use of research relates to the values, interests, experiences, and expectations they hold regarding research. Their use of specific findings relates to organizational factors. Neither general use nor use of specific findings was rated as high as would be ideal for a profession that aspires to be research-based.

These findings have implications for the promotion of research-based nursing. Theories of research use need to focus on the implementation of findings, as well as on their generation, communication, and evaluation. Research-based practice is complex, multi-factorial, and influenced by the setting as well as by the individual. Nurses must be taught to use research. In addition to the recent emphasis on research utilization in baccalaureate education, practice-related research activities should be built into curricula at all levels, in a manner commensurate with expectations for each level of practice. Nursing environments need to promote research-based practice. As argued by Spence (1994), changes in education are unlikely to have an impact unless they are accompanied by changes in organizations. Research-related expectations could be built into clinical requirements. The low perceptions of climate and support for research could be countered, especially by smaller hospitals. The differences in perceived expectations suggests that organizations should communicate their explicit research-related expectations.

Nursing research should continue to strive to address relevant research questions. Further study is required to identify why high value, interest, and expectations do not result in research-based practice. Exploration of organizational factors might help to explain differences between nurses' individual characteristics and the levels of research use. The findings regarding the influence of education on research use warrant investigation, to determine why additional research experience and education about research did not result in differences in reported research use. Further study into specific approaches to research education is needed, and the impact of courses focusing on research use and models of integrated research education should be evaluated. Finally, development and testing of models to explain the use of research in practice is required. Findings in more specific areas of practice should be reviewed, to identify research that can serve as an estimate of research use. Methods of measuring the implementation of findings must be sought. Qualitative approaches would facilitate a deeper understanding of the complex factors that influence research-based practice.

This study focused on the relationship between organizational expectations and support for the use of research in nursing. While expectations were not shown to directly affect research use, organizational infrastructure and climate were found to be influential. The conceptual framework directed the study to consider the problem of research-based practice within an organizational context, but examined that context in a limited fashion. Further study of research-based practice should consider nursing within a broader context and explore the extent to which nurses control their practice and are empowered to use research findings in their work. Nurses will be able to implement the findings of nursing research only to the extent that they understand and take control of their practice.

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Designer's Corner

Methodological Considerations in Acute-Care Research: Issues in Securing Self-Report Data

Therese S. Richmond

Clinical nursing research is subject to numerous field conditions and, as Hinshaw (1981) and Oberst (1992) note, it is rarely possible to implement a perfect research design without compromise. Nowhere is this more challenging than when conducting research with the acutely ill. While there have been several papers addressing methodological considerations in collecting physiologic data in this setting (Kiiski, Takala, & Eissa, 1991; Norman, Gadaleta, & Griffin, 1991; Sneed & Hollerbach, 1992), less attention has been given to the collection of accurate self-report data in the acutely ill. The important issue is not whether self-report data are valid, but rather the more relativistic issue of when are self-report data valid (Brown, Kranzler, & Del Boca, 1992). Not all problems in acute-care research are amenable to control; the tension lies in deciding how many concessions can be permitted while still obtaining accurate data (Bell, May, & Stewart, 1987; Hinshaw). It is important therefore to examine the context in which self-report data are obtained and develop ways in which confidence in self-report data can be maximized. Conducting pilot studies, establishing sampling criteria, overcoming patient access barriers, attending to measurement considerations, and enhancing recall of past events are specific strategies that enhance the accuracy of self-report data in the acutely ill. Examples from the author's experiences with data collection in a group of acutely injured patients are used.

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Pilot Studies: Maximize Effectiveness

Because of the complex nature of acute illness and the wealth of confounding variables that surface in acute-care research, timeframes for interviews of ill subjects are hard to generalize. Pilot studies serve to assess the feasibility of the study, examine the adequacy of instruments, and highlight problems in data-collection strategies, including subject burden. Despite the benefits of pilot studies, they are rarely mentioned in published research reports, with less than 20% of studies examined referring to pilot data (Prescott & Soeken, 1989). Pilot studies highlight issues of importance in the acutely ill such as the ability to comprehend during a time of physiologic and psychological stress, to attend to and participate in the interview, and to communicate responses. Most importantly, the pilot serves to inform the researcher of the level of fatigue and emotional burden experienced by subjects.

Sampling Criteria

One of the challenging issues in acute-care research is the volume of potentially confounding variables. One option is to create such stringent sampling criteria so as to eliminate many of the identified threats to validity. However, if all subjects with potential threats were eliminated, the researcher would be left with only a small and atypical minority. In other words, while stringent entry criteria increase internal validity, subjects remaining are not representative of the population at large and therefore external validity suffers (Zimmer et al., 1985).

Use of alcohol and illicit drugs is prevalent in today's society and frequently becomes an issue in the acutely ill. Commonly associated with trauma, ingestion of illegal substances are known to place individuals at risk for injury. In the acutely injured population withdrawal from substances such as cocaine is common and challenging to the clinical researcher. Acute withdrawal from cocaine results in overwhelming exhaustion, prolonged sleep, anergia, and depression (Wallace, 1991). The cognitive effects of withdrawal such as impaired concentration (Rawson, Obert, McCann, & Ling, 1993) produce difficulty maintaining attention, with subjects not attending to or even falling asleep during the interview process. Withdrawal from cocaine lasts from zero to 15 days, after which cognitive and behavioural manifestations normalize (Rawson et al.), but by this time subjects may be discharged. Strategies such as maintaining close physical contact with subjects, touching them on the arm throughout the course of the interview, maintaining eye contact, and taking a break to stimulate them with refreshments or position changes (if possible) may facilitate the completion of

the interview. Were trauma patients who were substance abusers to be automatically excluded from studies, clinical relevance and generalizability of findings in this population would be at significant risk.

Patient Access

There are unique environmental challenges in collecting data from the acutely ill, as data collection takes place in settings over which there is limited control, such as the intensive care unit with its disruptive sights and sounds. In non-intensive care settings, rooms are often semi-private with limited opportunity for privacy. Distractions and interruptions such as other patients entering the room, physicians and nurses giving care, and transports to therapy sessions, x-ray, or even operations should be anticipated (Egan, Snyder, & Burns, 1992). Kelsey and colleagues (1989) observed that when the timeframe for data collection is very close to discharge, activities such as physical and other therapies are more intensive, resulting in less availability of patients for research.

Strategies to enhance access of subjects in acute-care settings and ensure privacy can be difficult at best. Frequent checks on patients' conditions are necessary to find patients at a quiet time in their rooms during which data can be collected (Kelsey, O'Brien, Grisso, & Hoffman, 1989). Because acutely ill patients often have multiple services involved in their care, they often become increasingly fatigued as the day progresses. In the trauma population, the best time to approach subjects is early in the day or on Sunday morning when scheduled tests/therapies are not typically conducted. In addition, visitors are rarely present during this time, resulting in fewer interruptions and less fatigue.

The use of a face-to-face structured interview has major advantages such as the inclusion of the illiterate, the ability of the interviewer to stimulate or maintain the respondent's interest, and creation of an atmosphere conducive to answering questions (Nay-Brock, 1984). Using data collectors for structured interviews is time-consuming and labour-intensive (Fink, 1993). When multiple sites are used, the cost, in terms of transport and time, may be prohibitive. In acute-care settings, time must be planned for repeated visits, to deal, in a timely fashion, with unavailable subjects or interrupted interviews. When interviews are interrupted and cannot be completed during hospitalization, the choice must be made either to eliminate the subject from the study or to complete a telephone interview immediately post-discharge (Kelsey et al., 1989).

Measurement Considerations

Data-collection procedures may require modification to accommodate the unique challenges of the acutely ill. These challenges can be ascertained in a pilot study (Prescott & Soeken, 1989). The physical task of completing a questionnaire has been identified as a problem in many populations (Bell et al., 1987; Zimmer et al., 1985) and may be insurmountable for acutely ill patients with physical deficits. While the use of structured interviews alleviates some problems, other challenges arise. For example, in the trauma population, patients may have massive facial fractures requiring wiring of the face and jaw, be intubated, or have tracheostomies, all resulting in significant verbal communication difficulties that provide challenges for conducting structured interviews. Despite the presence of physical compromise, these physiological changes alone are not usually sufficient to preclude involvement in the study (Bell et al.). Pilot studies can highlight the feasibility of using other modes of communication such as lip-reading, written responses, or use of notebook computers (instead of verbal responses) in this sub-group of patients.

Respondent burden is a major issue considered by human subjects boards. However, approval from these boards cannot be assumed to eliminate all ethical concerns (Smith, 1992). According to Kelsey and colleagues (1989), healthy subjects younger than 75 years of age can complete a questionnaire or a series of questionnaires that take approximately one hour. This does not easily translate to the acutely ill. Egan et al. (1992) reported that fatigue or pain is problematic and Cassileth and Lusk (1989) further identified the difficulties of contending with impaired physical status. In the acutely injured trauma population, this author found that pain and its treatment, invasive procedures, repeated surgeries, and substance abuse withdrawal all affect the ability of subjects to attend to research interviews.

The duration of interviews requires careful consideration. Enough questions should be included to ensure reliability. However, interviews that are too long may be stressful and fatiguing to subjects and may result in answers given carelessly or without thought (Shaw, 1992). The difficulty is that briefer questionnaires may be too limited to provide the information required by the study at hand (Cassileth & Lusk, 1989). In essence, research materials should be simple, well organized, short enough to accommodate the needs of the sample, but long enough to assure reliability. Fowler and colleagues (1992) identified subject fatigue as a major logistical problem in collecting self-report data from people with AIDS. They reported that interviews often took twice the time that

would be expected in other populations. This problem is not unique to patients with AIDS and frequently surfaces in the acutely ill, many of whom are slower in their response time and require more time than the average healthy adult.

An option for dealing with respondent burden includes conducting the interview in more than one session. However, this is not without its challenges. Some instruments (e.g., the Sickness Impact Profile: Bergner, Bobbitt, Carter, & Gilson, 1981) specify that the instrument must be completed within 24 hours. Using shorter forms of existing instruments is also an option. However, validity and reliability must be carefully attended to with the investigator recognizing the increased potential for floor and ceiling effects and less variability of responses in shorter forms. An alternative is to use family members as proxy respondents. However, information about highly personal issues may be so confounded as to be unreliable (Cassileth & Lusk, 1989; Fowler et al., 1992). Additionally, there may be no family, or the family situation may be tumultuous and chaotic. Furthermore, in the traumatically injured, family members may have accidentally caused the injury (e.g., drivers in accidents), purposely injured the subject (i.e., domestic violence), or may have been critically injured or killed in the same event.

Maximize Reliability of Self-Report Data

Individuals may have recall that is unintentionally inaccurate (Coughlin, 1990). Such random errors usually result from transient states common in the acutely ill, such as hypoxia, the presence of toxic metabolites, transient alterations in cognitive states, and analgesia. With increasingly shortened stays, convalescence no longer takes place in hospitals, and therefore return to normal or baseline cognition may occur at home. For example, patient-controlled analgesia (PCA) for pain management is commonly used in the acutely ill. With the rapid transit through hospitals, PCAs are often stopped just prior to discharge, making it logistically difficult to obtain self-report data following their discontinuance, yet prior to discharge. The same issue holds true for other types of sedatives commonly used. Such states are often beyond the control of the investigator and threaten the reliability of the data obtained.

In order to maximize reliability of self-report data, the investigator can take several steps. First, recognize that even in patients who are fully oriented (to person, time, and place) and who retain decision-making capacity for informed consent, subtle cognitive changes may be present, resulting in unintentional distortion of responses. Incorpor-

ating a mini-mental-status exam at the commencement of data collection is one strategy that can maximize reliability. Second, the researcher is confronted with a difficult choice: to weigh the limitations of collecting data from those in intense pain versus including subjects on PCA who may be slightly sedated but have sufficient pain control to attend to the interview process. If those with PCA are eliminated from the sample, many acutely ill patients would be eliminated, providing an unrepresentative sample. Alternatively, discontinuing such therapy for the purpose of the research would be both unethical and impractical (Bell et al., 1987; Zimmer et al., 1985). Many studies have found sedation with PCA to be relatively mild, with patients occasionally drowsy but easily aroused (Eige, 1992). As most effects of opiates are dose-related, the researcher must individually judge the optimal time when data can be obtained.

Enhance Recall of Past Events

Respondent characteristics and motivation are of central concern to the collection of self-report data. Subjects may intentionally distort information, referred to as *biased recall*, resulting in threats to validity. Despite the significance of the conscious distortion of self-report data, characteristics of individuals who may distort data have received scant attention in the research literature (Chapman & Brena, 1990). Some groups, such as the elderly, may intentionally provide incorrect responses to satisfy the interviewer, especially if they cannot recall pertinent events (Fink, 1993; Zimmer et al., 1985). However, the researcher must be careful not to pre-judge based on age alone, since studies have demonstrated that older respondents are sometimes more accurate than younger respondents when comparing responses to objective evidence (Rodgers & Herzog, 1987). Conscious distortion also occurs in the hope of obtaining extrinsic goals (Chapman & Brena).

Given the unexpected nature of many acute illnesses, researchers are confronted with the challenge of obtaining accurate pre-illness information. For example, when using functional recovery as a major outcome variable, assessment of pre-illness level of function is important. However, memory is fallible and recall bias may occur (Abramson, 1990). The time interval since the event and the degree of detail required in self-report data have been shown to influence the accuracy of recalled data (Coughlin, 1990).

Interviewing techniques and the content and form of questions have been shown to influence the recall of past events (Coughlin, 1990). The use of specific questions or carefully designed probes assists recall

(Kelsey et al., 1989; Preston-Martin, Bernstein, Maldonado, Henderson, & White, 1985). In pilot work, this author examined two instruments measuring a main outcome variable: functional status. The instrument that used semi-structured questions requiring significant verbal output, rather than structured responses, was problematic on three fronts. First, subjects who had limited verbal skills were unable to construct and articulate their inner thoughts. Second, subjects responded much better to a structured interview in which they had to affirm only if the statement read applied to them, rather than volunteering responses without cues. Finally, when the study design requires interviews in less than personal areas (i.e., semi-private hospital rooms), subjects were not likely to volunteer the presence of deficits in highly private areas of function. However, when asked a specific item from a structured interview schedule for which they only had to respond with a yes or no, data could be obtained. Although it would be preferable to assure that the subject is alone and comfortable during any interview, this is not always a viable alternative during acute hospitalization.

Summary

Conducting research in the acutely ill and injured is important to broaden the scientific foundation of nursing practice for the specialty. Given the nature of acute illness, challenges to the collection of self-report data are numerous, but they are not insurmountable. Attending to these challenges and planning for strategies to enhance the accuracy of data are important tasks for any investigator considering research in groups of patients with acute illness or injury.

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Brief

The Meaning of Critical Illness to Families

Patricia A. Rose

La maladie grave crée des tensions chez les malades et leur famille. Pourtant, les réactions de la famille varient et le fait d'avoir un être cher au service de soins intensifs peut ne pas entraîner de crise dans toutes les familles. L'objectif de la présente étude est d'examiner et de décrire le sens que les familles donnent à une situation liée au service de soins intensifs. On a conduit des entrevues en profondeur mais non structurées avec dix-huit membres de huit familles qui ont un malade en service de soins intensifs. On a analysé les entrevues qualitativement et celles-ci ont révélé cinq catégories de sens que cette situation avait pour les familles : *c'était l'un ou l'autre, tout va bien, monter les étages, c'est comme si j'étais sur des montagnes russes, et il n'y a aucun espoir*. Les huit familles étaient unanimes à décrire une période d'incertitude durant laquelle elles ne savaient pas si le malade survivrait. Ensuite, la trajectoire que prenait la maladie grave suivait l'une des deux voies : positive ou négative. Les conclusions de l'étude intéresseront les infirmières qui veulent mieux comprendre les effets de la maladie grave sur la famille.

Critical illness creates stress in patients and their families. However, families' reactions vary and suggest that having a loved one in an intensive care unit (ICU) may not be a crisis for all families. The purpose of this study was to explore and describe the meanings that families ascribe to an ICU experience. In-depth unstructured interviews took place with 18 family members from eight families of ICU patients. Interviews were analyzed qualitatively and revealed five categories of meanings that the ICU experience had for families: "it could go either way," "everything is good," "going upstairs," "like living on a roller-coaster," and "there is no hope." All eight families described an initial period of uncertainty during which they were unsure whether the patient would survive. The subsequent trajectory of critical illness followed one of two paths: positive or negative. The results of this study are of interest to nurses who seek to broaden their understanding of the impact of critical illness on the family.

Critical illness creates stress in patients and their families (Halm, 1992; Koller, 1991; Lynn-McHale & Smith, 1991). It is not clear that the experience of all families can be labelled as the crisis of critical illness (Kleiber et al., 1994; Reeder, 1991). Observations made in clinical practice raised the question of how families determine the nature of their

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experience in an intensive care unit (ICU). Some families were seen to react calmly to situations that the staff viewed as a crisis, whereas others seemed to have difficulty coping with situations that contained few elements of uncertainty. This prompted consideration of how families appraise the ICU experience. The purpose of this study was to describe and explore the process that families use in assigning meaning when a family member is in the ICU.

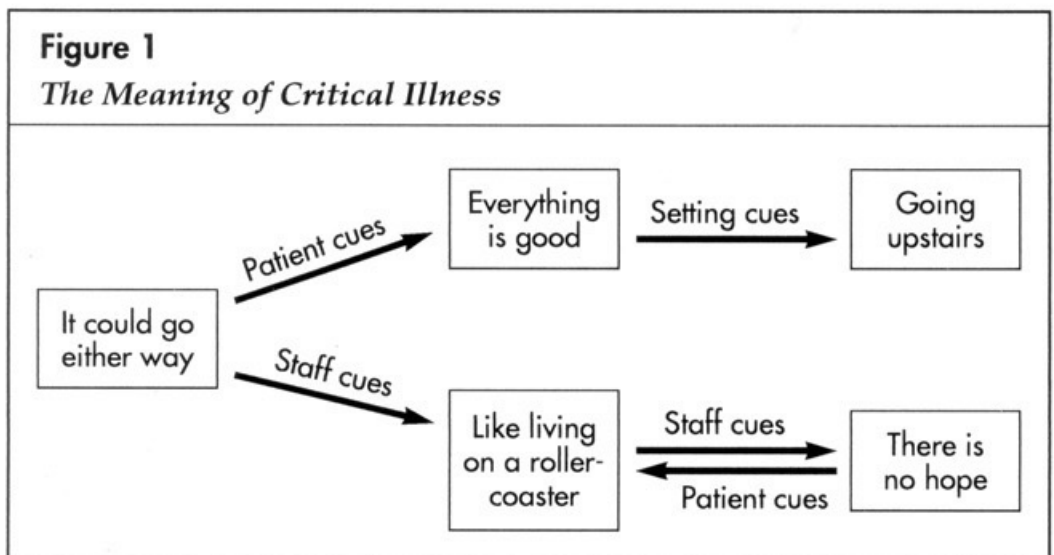
Methods

A qualitative design was chosen for the study. Eight families of patients in a surgical ICU participated. During in-depth unstructured interviews, a total of 18 family members talked about their ICU experience. Interviews took place over a period of time varying from one to eight weeks.

Data were analyzed qualitatively. The unit of analysis was a specific instance that included either a statement by the family that described their appraisal of their situation, or references to the cues that were used during that appraisal process.

Findings

Families described five meanings that the ICU experience had for them (Figure 1). In all cases this meaning changed over time, as the result of a cue that the family perceived as an indicator of a change in their situation. The cues used by families to assess their situation consisted of stimuli received from the patient, the staff, and the setting.



All eight families described an initial period of uncertainty during which they were unsure whether the patient would survive. During this time families verbalized their feelings of hope, anxiety, and uncertainty. They talked of how "it could go either way." Throughout this initial period families sought indicators that their situation was improving. To this end, they monitored the patient's appearance and talked with staff.

In describing what this uncertain time was like, families clearly outlined when that period ended and what caused it to end. The subsequent trajectory of critical illness followed one of two paths. Families who obtained positive cues from the patient went on to "everything is good" while families who received negative cues from staff proceeded to "like living on a roller-coaster."

Path 1

Everything is good. For four families, a change in the meaning of the situation began with a cue from the patient. Verbal and non-verbal patient behaviours were interpreted as signs of improvement and effected a change to "everything is good." During this phase families looked to equipment in the ICU setting to confirm that the patient was getting better. Families for whom the ICU experience took on a meaning of "everything is good" had short, uneventful stays in the ICU before being transferred "upstairs."

Going upstairs. All families who experienced "everything is good" continued on an upward trajectory to "going upstairs." For these families, an alteration in their situation was prompted by a change in setting.

Path 2

Like living on a roller-coaster. After experiencing "it could go either way," four families progressed to a situation that was more negative – one which they described as "like living on a roller-coaster." These families outlined how verbal and non-verbal behaviours of staff had altered the meaning of the situation. Families described the constant ups and downs in both the patient's condition and their own experience. Over and over, they emphasized how they coped by taking one day at a time.

There is no hope. All families who described their situation as "like living on a roller-coaster" experienced a transition to "there is no hope." This occurred after families were told by the staff that there was little

chance that the patient would survive. Families became discouraged and talked of the patient's imminent death. Once there was no hope, families no longer relied on staff cues to evaluate their situation. Instead, they focused on the mental status of the patient. Families were able to detail the bad clinical picture of the patient but, at the same time, watched for a sign from the patient that the situation was not as bleak as it appeared.

Discussion

This study suggests that the ICU experience has five meanings for families. It also outlines the variety of cues families use to determine that meaning. Descriptions of these cues and meanings will help nurses to understand the day-to-day experience of families. Families' perceptions of their situation are not always congruent with the staff's evaluation of the situation. This discrepancy in perceptions creates difficulties when nurses judge families as reacting inappropriately to the patient's condition. It may be that families do not respond to the physical, objective environment but rather to the environment as it has meaning for them. Staff, on the other hand, may assess the patient's condition on the basis of objective information that is interpreted in light of their expert knowledge and experience. Nurses need to increase their awareness of the subjective nature of the process by which families assign meaning to their situation. Future research should be directed at exploring the relationship between families' and nurses' perceptions of the ICU experience and at describing ways in which discrepancies in these perceptions can be diminished.

It appears that all families who experience "like living on a roller-coaster" proceed to a situation wherein "there is no hope." This finding would seem to preclude families from experiencing "everything is good" after they have spent a period of time "living on a roller-coaster." Given the size and characteristics of the study sample, conclusions must be drawn cautiously. There is a need to examine the ICU experience of families from a larger, more varied group.

The findings of this study suggest that staff cues carry mostly negative connotations while patient cues are viewed as positive. Knowing that patient and staff cues play different roles in families' perceptions will enable nurses to pay closer attention to the implications of their own behaviour, as well as that of patients. The exact nature of the role that patient and staff cues play requires further exploration.

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Commentary

Nursing and the Body

Franco A. Carnevale

In this short paper I will argue that "psychosocial" nursing research is premised on a mind/body split that disembodies persons and fragments the representation of health and illness experiences. I will also argue that this disembodiment has created a rift between nursing research and nursing practice.

When I review the nursing research literature on acute care, I am struck by the scarcity of attention to the body. Nursing researchers seem to have left the body to the biomedical investigators, concentrating their own efforts on the psychosocial dimension of acute illness.

Psychosocial nursing research is based largely on notions of stress and coping; it examines constructs such as stressors, perceptions, appraisals, needs, beliefs, adaptation, and coping responses of persons "managing" their health and their illness. These constructs "frame" health and illness experience in cognitive terms – presuming that people know what is distressing them, that they think about these things, that they can talk about these things, and that they consciously decide what they will do about these things.

Contemporary notions of "stress" are very much rooted in a biomedical framework. Hans Selye is renowned for having highlighted the physiological manifestations of excessive demands on the body; he referred to the manifestations as stress, to the demands as stressors. Selye characterized the overall response of the body to stress as a process of adaptation.

Subsequent researchers in psychophysiology and psychosomatic medicine discovered a link between mind and body. Psychological distress became recognized as a cause of physiological disorder. Yet

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human experience was characterized in linear terms: a person (1) encounters stressors, (2) becomes stressed, and (3) adapts.

In the late 1960s and the 1970s these universal claims were largely refuted. Linear models of stress were supplanted by more "psychologically sophisticated" frameworks (Young, 1980). The stress, appraisal, and coping framework articulated by Richard Lazarus became particularly prominent in the nursing research literature. In this model, the person faced with stressors engages in a complex cognitive appraisal of "what's at stake." This appraisal shapes the person's subsequent stress experience and his or her "coping response." This stress and coping paradigm has been further elaborated as a way of understanding the experience of families.

The psychosocialization of nursing research seems rooted in the disembodied rationality that is prevalent in Western psychology. Mind/body dualism can be traced to the 17th-century thesis of Descartes, "*Cogito ergo sum*" (I think, therefore I am). This ideology presumes that cognition can be disengaged from the realm of the body and serve as the "site" of human experience.

A number of social studies have further examined the ethnocentricity of this dualism. Several ethnographies suggest that the presentation of illness (including bodily symptoms) is shaped by cultural views of health, illness, and healing (Kleinman, 1988). The body can also be an object of social domination, wherein bodily expressions are interpreted as a form of social dissent (Lock, 1993). Culture determines what is construed as "normal" and what is construed as "pathological."

Thus the dualistic view that the body can be separated from the mind is a highly contestable one. The bodily manifestation of illness is expressive of human physiology as well as of cultural context. Similarly, the psychosocial separation of the mind from the body is problematic. The mind is embodied, and it is inescapably expressive of bodily experience.

A stress and coping framework for nursing research requires that the researcher construct a cognitivistic, disembodied representation of human experience. However, much of health and illness experience is broader than what a cognitivistic framework can accommodate, and it frequently lies outside the realm of articulacy.

During the course of several studies, I have interviewed and administered questionnaires to a number of patients and their families, as well as nurses, with the aim of having them describe their "stressors" and how they "cope" with them. My informants have consistently

exhibited discomfort representing their experiences in these terms. Often they find it difficult to present their experiences in words at all.

For example, the death of a child affects a complex constellation of elements in a parent's life. Asking a bereaved parent to list what is stressful about such an experience, and to rank the stressors and describe how he or she copes with each of them, results in a fragmented representation of a grief experience.

On the other hand, when I speak "freely" with bereaved parents in my clinical practice they frequently speak of feeling empty, hollow, tormented; they may have a loss of appetite and sleep disturbances; their whole body seems to be grieving. Also, they typically say that words simply cannot do justice to what they are going through.

The proliferation of nursing research on pain further illustrates nursing's disembodiment of acute illness. Although I recognize that pain research has advanced our understanding of nociception and how it can be effectively mediated, I object to how this has fostered a fragmenting of human suffering.

The dominant trend in nursing research is to frame suffering in dualistic terms: (1) there are nociceptive pathways in the body that are activated by physical events, and (2) there is a perception of pain in the mind. Working within the psychosocial tradition outlined above, nursing researchers have been interested in how we perceive our pain and how we cope with it. Whereas medications affect how pain is transmitted, cognitive strategies (such as imagery or self-control techniques) affect how it is perceived. Ultimately, injury is seen to be in the body and pain in the mind. This dualistic framework perpetuates the disembodiment of suffering.

In my clinical practice, I have found that persons express suffering in holistic terms, through words, silence, moans, movements, physiological fluctuation – suffering involves the whole person. Suffering is existentially "thick," in that bodily experience is deeply rooted in the larger significance it has for the person. The suffering that accompanies illness threatens the integrity of a person's sense of self and life.

Dualistic models of pain contribute to the disintegrating and compartmentalizing of human experience. I have found that I can comfort a person's suffering best when I try to understand "what it is like" for the whole person, without imposing my pain dualisms. I use my understanding of pain but I am not centred on it. I realize that the language of pain is part of *my professional* language and does not sufficiently represent the patient's broader suffering experience.

Embodiment is also relevant for the clinical expertise of nurses. Clinical expertise seems rooted in practical, embodied "know-how" that is beyond the grasp of rationality (Benner, 1994).

I propose that we turn to the practice of nursing for guidance on how to embody nursing research. As I understand nursing practice, an expert nurse directs her efforts toward "getting to know" the patient. This involves getting a grasp of how the patient is construing the situation, discovering what matters to him or her, and becoming familiar with the patient's ways of doing things. Throughout this process, the nurse draws on her current understanding of physiology as a framework for interpreting bodily function – this is elaborated into an understanding of the patient's particular bodily function and an ongoing revision of the nurse's general understanding of physiology. The same process holds for the nurse's understanding of psychology, spirituality, social systems, and other relevant domains, and how these pertain to a particular patient. Over time, the expert nurse comes to a holistic understanding of the patient within which to interpret his or her expressions (including bodily expressions).

My portrayal of expert nursing characterizes the practice of nursing as a process of "thick" interpretation (Benner, 1994). Thick interpretation is dependent on a thorough understanding of what is significant to a particular patient, within the context of the culture and community that largely shape how things matter to him or her and how these are expressed. Within this framework, I recognize that much of my a priori research knowledge is fragmented. I recognize that human experience is enmeshed in the webs of meanings and practices that shape a person's way of life. Whereas the dominant psychosocial nursing paradigms disembodied human experience, an interpretive framework seeks to embody patient accounts – representing the body in whatever way it presents in a particular encounter.

In light of the complex ways in which context shapes the experience and expression of illness, I would like to see a more vigorous promotion of interpretivism in nursing research. This would also foster a harmonizing of nursing research with nursing practice.

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The Meaning of Respect: A First Nations Perspective

Annette J. Browne

Partant du point de vue de cinq informateurs-clés des tribus Cries-Ojibway, on a étudié qualitativement la signification du respect. Les données sont tirées d'entrevues en profondeur faites auprès de membres des Premières Nations au nord du Manitoba. Au cours de ces entrevues, on a mis l'accent sur ce que nos interlocuteurs entendaient par respect et s'ils considéraient être traités avec respect ou non pendant leurs interactions avec le système médical. L'analyse qualitative a établi les caractéristiques du respect et du manque de respect dont ont parlé nos interlocuteurs des Premières Nations dans leurs interactions avec les soignants occidentaux. La notion de respect comprenait les valeurs morales liées à l'égalité, la valeur intrinsèque de la personne, son unicité et sa dignité. Les conclusions ont montré la nécessité pour le personnel infirmier de connaître la situation sociopolitique des clients appartenant aux Premières Nations. Les descriptions préliminaires de ce qui signifie le respect, établies par la présente étude, forment le fondement d'une analyse plus poussée du concept.

A qualitative study was conducted to explore the meaning of respect from the perspective of five Cree-Ojibway key informants. Data were obtained from in-depth interviews conducted in a First Nations community in northern Manitoba. Interviews focused on key informants' understanding of the meaning of respect, and their experiences of being treated with or without respect during clinical interactions. The qualitative analysis identified characteristics of respect and lack of respect that reflected the informants' experiences as First Nations persons interacting with Western health-care providers. The features of respect reflected ethical values related to equality, inherent worth, and the uniqueness and dignity of the individual. Findings highlighted the need for nurses to be cognizant of the sociopolitical context of interactions with First Nations patients. The preliminary descriptions of respect identified in this study provide a foundation for further analysis of the concept.

Although the concept of respect is assumed to be fundamental to nursing practice, little is known about the ways in which nurses convey respect. Even less is known about the experience of receiving respect from the patient's perspective. Understanding patients' perspectives and experiences can provide clues about factors that influence the nature and quality of nursing interactions with them. Since respect is a fundamental component of the caring process, gaining patients' perspectives of what it means to be treated with respect has the potential to significantly affect nursing practice. Additionally, as

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more is learned about the concept of respect, opportunities will develop to apply it in valuable ways in practice, theory development, research, and education.

This qualitative study explored the meaning of respect from the perspective of Cree-Ojibway key informants. The study was intended to provide preliminary descriptions of respect as a foundation for further analysis. For the purpose of the study, respect was analyzed as a concept in the domain of nursing action as identified by Kim (1983). Concepts in this domain address the following question: "Would a variation of this occurrence...taking place between the client and the nurse in any way alter (or should alter) the way the client feels, perceives the world relevant to health, and proceeds to make future moves regarding his or her health state?" (Kim, p. 122). The "occurrence" examined in this study was respect, as conveyed to Cree-Ojibway patients by nurses and physicians during health-care interactions.

The study reported in this paper represented the fieldwork phase of a larger study that addressed a concept analysis of respect using the Hybrid Model of Concept Development (Schwartz-Barcott & Kim, 1993). Fieldwork is a critical component of the concept-analysis process. In this phase, empirical data were collected and analyzed as a way of further defining the key elements of the concept (Schwartz-Barcott & Kim). The findings presented in this paper therefore describe the elements of respect as understood by Cree-Ojibway key informants. The paper begins with a review of the literature addressing the meaning and applications of respect. An overview of the design and methods is provided, followed by a discussion of the findings and concurrent analysis. The paper concludes with a discussion of nursing implications related to respect in the context of cross-cultural interactions between Western nurses and First Nations clients.

Review of the Literature

Respect as an Ethical Principle

Various philosophers have deliberated on the meaning and significance of respect as a primary ethical principle and human value. Immanuel Kant describes respect as a "humanity principle" that recognizes the intrinsic value inherent in all humans and their potential for autonomy (in Milne, 1986, p. 86). Downie and Telfer (1970) describe the primacy of respect as the central moral attitude from which all other moral principles are explained. Rokeach (1979) discusses respect as a human value that addresses human dignity and justice. In literature concerning

human rights, respect is considered the core value, an interrelationship that recognizes the freedom of choice, inherent worth, and essential equality of persons (Howard, 1975; McDougall, Lasswell, & Chen, 1980). In a conceptual analysis of the humanization of health care, Howard refers to dignity and respect as ideological dimensions of humanization.

Respect as a Component of Caring Interactions

In nursing literature, respect is discussed as an ethical concept that addresses the values of human dignity, inherent worth, and uniqueness of persons (Carper, 1979; Eliason, 1993; Gaut, 1983, 1986; Kelly, 1987, 1990, 1991, 1992; Leininger, 1989, 1990; Silva, 1983). The first two values for professional nursing identified in the Canadian Nurses Association *Code of Ethics for Nursing* (1991) are respect for the needs and values of clients and respect for client choice.

Respect is also identified as a fundamental concept in theory development pertaining to caring (Carper, 1979; Fenton, 1987; Forrest, 1989; Gardner & Wheeler, 1981; Gaut, 1983, 1986; Kelly, 1987). By studying professional ethics among nursing students, Kelly (1987, 1990, 1991, 1992) was able to define nursing actions that are indicative of respect and caring. Behavioural demonstrations of respect included (a) the manner in which patients were addressed, (b) sending the patient positive messages early in the interaction, (c) providing privacy for patients, (d) explaining and listening to patients, and (e) letting patients do for themselves. Kelly also identifies respect and caring as two central ethics for nursing, noting that the components of respect relate to three themes: (a) respect for human dignity and the uniqueness of patients, (b) respect for the patient's capacity for self-determination, and (c) acceptance of a patient's values. Moreover, respect is considered a necessary antecedent to caring: "In the absence of respect, caring cannot take place" (1990, p. 72).

Patients' Perceptions of Clinical Interactions

Although Kelly's (1987, 1990, 1991, 1992) studies provide substantive data concerning definitions of respect, the author found no studies in the literature that examine the experience of *being* respected, from the patient's perspective. Related results, however, are provided by studies that examine patients' experiences of clinical interactions. For example, Sherley-Spiers (1989) explores Dakota First Nations' perceptions of clinical encounters with Western health-care providers. Findings

demonstrate that clinical encounters were frequently characterized by discriminatory and racist actions, resulting in experiences of depersonalization and dehumanization for patients. Support and respect for Dakota patients were found to be lacking in patient-provider interactions. Although informants did not define respect, the findings suggest a link between respectful (or disrespectful) treatment and issues related to discrimination and prejudice.

Anthropologist John O'Neil (1989) studied patient dissatisfaction in cross-cultural clinical encounters by analyzing Inuit interpreters' understanding of the nature and quality of clinical interactions between Inuit patients and Western health-care providers. His findings illustrate that clinical communication by Western providers was strongly influenced by paternalism and disregard for cultural or sociopolitical factors affecting interactions, resulting in patient dissatisfaction with clinical experiences.

Chipperfield (1992) undertook a longitudinal quantitative study of the degree of respect shown to elderly persons by other members of the community, as perceived by the elderly respondents. Using a five-point scale, differences in perceived respect among various cultural groups were documented, with native elderly persons providing the lowest ratings at all points in time. Interpretation of the findings was limited, however, since no conceptual or operational definitions of respect were provided.

To summarize, the literature discusses respect as an ethical concept for nursing and a necessary component of caring interactions. Studies that involved aboriginal patients point to a link between discriminatory and paternalistic treatment, and a compromise in the integrity of clinical interactions. No studies were found, however, that examined the meaning of respect from the patient's viewpoint. The study presented in this paper was intended to address this gap in the research literature.

Method

Purpose

The purpose of this qualitative study was to provide descriptions of respect as a phenomenon occurring during clinical interactions from the perspective of Cree-Ojibway key informants.

Research Questions

The research questions addressed in this study were: What is the meaning of respect for Cree-Ojibway clients? In what ways are respect-

ful interactions described? In what ways are interactions that lacked respect described? What, if any, are the implications of respect or lack of respect for clients?

Design

The study used in-depth interviews based on ethnographic interview techniques outlined by Spradley (1979). As a qualitative approach to research, in-depth interviews are intended to provide descriptions of human behaviour and experiences from the perspective of those who have lived them, expressed in their own words (Spradley; Taylor & Bogdan, 1984). The emphasis is on obtaining descriptions that reflect the emic (insider's) perspective, instead of the more traditional objective or etic (outsider's) perspective (Spradley). This method of data collection is particularly useful when there is limited knowledge of the phenomena under study and the researcher is interested in description and meaning.

Procedure

Interviews with key informants were conducted in a Cree-Ojibway community in northern Manitoba during a six-week period. After the purpose of the study had been discussed with informants and informed consent had been obtained, unstructured interviews were held with each informant separately, each lasting from one to three hours. Each informant was interviewed a second time, to clarify and validate data obtained in the first interview. The specific aims of the interviews were to: (a) elicit key informants' understanding of the meaning of respect, (b) obtain examples of "model cases" of respectful interactions and "contrary cases" of interactions lacking respect, (c) discuss cases that most people in the community would agree on, and (d) discuss the implications of respect or lack of respect on the informants' thoughts, feelings, actions, and well-being, based on their personal experiences. The interviews were audiotaped and transcribed verbatim as soon after the interviews as possible.

Data were organized and analyzed using a variation of Schatzman and Strauss's notation system, as recommended by Schwartz-Barcott and Kim (1993). The notation system allowed for concurrent collection and analysis of data, and provided the opportunity for key informants to clarify content and validate the emerging analyses in subsequent interviews. As data analysis proceeded, recurrent patterns of interactions and behaviours indicative of respect and lack of respect were

identified. Parts of the narrative data were then classified into model and contrary cases of respect (Schwartz-Barcott & Kim). Classifying data into model and contrary cases facilitated identification of the characteristics of respect described by key informants.

Selection of Key Informants

Five key informants, four women and one man, were selected by the researcher and invited to participate in the study. Suggestions from other Community Health Nurses who worked in the community for five years or longer were also considered in the selection process. Ages of key informants ranged from 27 to 51. All met the criteria for key informants as identified by Spradley (1979): all were knowledgeable about their community and their culture, were currently active members of the community, and had adequate time to devote to the interview process. Although all key informants were fluent in English, their first language was a Cree dialect.

The researcher had worked as a Community Health Nurse in the community's nursing station intermittently over a four-year period and was known to many of the community members. Association with the community had the advantage of contributing to the "rapport process," an essential step in ethnographic interviewing (Spradley, 1979, p. 78). It also allowed "backstage" access to information to which outsiders are not usually privy (Leininger, 1985, p. 49).

Findings

Findings are presented as characteristics of respect and lack of respect, and reflect both model and contrary cases of respect discussed by informants. Examples from the narrative data accompany the characteristics to guide the reader through the investigator's analytic process (Rosenbaum, 1991).

To determine whether the researcher and the key informants were discussing the same concept, informants were asked to give the Cree interpretation of respect. Informants consistently responded with the same Cree term and related its meaning to interactions between people.

Model Cases

After model cases had been collectively reviewed, six characteristics of respect became apparent.

Capacity to treat people as inherently worthy and equal in principle.

Respect was described as a reciprocal process, one that acknowledges the equality of persons. One informant explained:

This is what respect is: when people treat me the way I am, not like a stereotype. When you experience respect in this way you tend to treat other people better, say, people from other races. It is like this: when I respect someone, they respect me.

According to Howard (1975), the capacity to view people as equal in principle is tied to the notion of inherent worth: the capacity to accept people as worthy of respect regardless of merit, ability, or social status. For the key informants, however, issues of equality and worth were tied to their experiences as First Nations persons. Informants described a link between providers' attitudes toward them as First Nations people and the incidence of respectful clinical interactions.

Acceptance of others. All key informants identified acceptance as a specific component of respect. One informant explained:

One member of our family is of a different religion. He is living common-law with someone. In our religion we don't believe in that. But we have to accept it, to function as a family, even if we don't agree with it. And he has to accept our beliefs too. This is a form of respect, because you respect his choice. You don't judge him for it, even if in our eyes it is wrong.

Acceptance of others is closely tied to the capacity to view others as inherently worthy (Howard, 1975). Throughout the narratives in the study, the values of equal status, inherent worth, and acceptance were identified by informants as essential to respect. These values were also supported by the literature as primary features of respect.

Willingness to listen actively to patients. This characteristic was identified by all key informants as an essential feature of respect. One informant stated:

Listening is an important part of respect. The nurse or doctor shouldn't cut me off. I don't have a lot of problems dealing with doctors or nurses because I can speak for myself; I know what I need. But some people can't speak up, or don't speak up. They end up getting shoved around.

Another informant reported:

The main way we show respect to our elders is by having patience with them, listening, and trying to understand them.

Although listening was considered important, it did not necessarily correspond to the amount of time spent with patients. For example,

one physician well known to the community was often rushed during interactions with clients, yet informants still felt respected. One informant related that Dr. A

still treats people with respect, in his own way. He may only take one minute to be with the patient, but when he does he's really there, he really listens, and he's really serious.

The implications of this point are significant, given today's climate of staff cutbacks and increased patient loads. If, as these informants report, respect can be readily conveyed during brief interactions, it is a worthwhile and justifiable pursuit to foster an attitude of respect during interactions with patients.

Genuine attempts to understand patients and the unique situation of each. Informants also discussed their interpretation of providers' attempts to understand their patients.

The main thing is trying to understand the person. If a nurse wants to respect a person, she would ask a lot of questions if she had time, and if it was really important to the patient she would make time. And it would make the patient feel good. Like with our elders, we respect them by trying to understand them, even if we don't agree with what they are saying.

Respect was also defined as understanding and accepting patients' values, beliefs, and practices:

I'm a person that doesn't plan whether I get pregnant or not. It's part of my religion too. I expect others to understand me – what I know for myself about this, and how I feel. But my attitude about this, and the fact that I have 10 kids, is opposite to the medical way of planning and controlling everything. I know it's hard to understand other people's ways of thinking and beliefs, but I think doctors and nurses should be taught to do that, to try to understand their patients' ways of doing things. That would be respectful, in my opinion.

This example illustrates that respect can be demonstrated by understanding not only the patient's unique situation, but also why patients make the choices they do. If "patients feel that their personal understanding of their problems are heard, respected, and given weight in decisions regarding treatment, then satisfaction with the encounter will occur" (O'Neil, 1989, p. 327).

Attempt to provide adequate explanations. Providing understandable explanations to patients during clinical interactions was seen by the informants as another way of showing respect. This characteristic played a role in determining the patient's ability to make decisions related to health issues.

You can show respect to patients by explaining things. Explaining is very important. For example, some people don't know what medicine they are taking. Some people don't ask either; they just take it.... Especially the old people; they don't ask anything. They want to please the nurse so they just take it. But the nurse knows a lot about medicines...that is why they should explain things.

Providers who offered explanations were seen as creating an opportunity for patients to exercise their autonomy. In this context, providing adequate explanations is tied to issues of shared decision-making, power, and control during health-care interactions (Lazarus, 1988), and as such has ethical implications for patient care.

Sincerity during interactions. Key informants described their ability to sense the sincerity of the provider by observing her or his demeanour, especially on initial contact. Something in the provider's verbal and nonverbal behaviours early in the interaction was quickly interpreted by patients as an indicator of respect. The following statements reflect this point:

When we come into the clinic room, we just watch her; how she is, if she says hello, how she acts.... I know right away the mood the nurse is in; whether she's in a hurry, or doesn't want to answer questions or tell me anything. I just stop [interacting with her]. What's the use?

Informants reported instances in which the nonverbal messages led patients to entirely avoid interacting with certain providers. Patients in cross-cultural interactions may be particularly sensitive to nonverbal messages, as they tune into nuances and nonverbal cues to facilitate communication (Leininger, 1978). It is imperative, therefore, that nurses and other providers develop an awareness of the attitudes they convey nonverbally, so that seemingly innocuous behaviours are not interpreted in negative ways by patients (O'Neil, 1989).

The six characteristics of respect described above reflect key informants' understanding of what it meant, as First Nations persons, to be treated with respect by Western providers. These characteristics are contrasted in the following section with descriptions of lack of respect discussed by informants as contrary cases.

Contrary Cases

Contrary cases represent interactions that resulted in a lack of respect for the patient. Since the key informants spent a significant amount of time describing their experiences of disrespect, eliciting contrary cases

was a particularly useful way of gaining insight into the meaning of respect.

Lack of respect stemming from discriminatory attitudes. Informants discussed lack of respect in the context of First Nations identity and status in Canada, prejudice, and discrimination. They described discriminatory attitudes as indicative of lack of respect.

I felt that she [the hospital nurse] didn't want to touch me because I was Indian, like she thought I was dirty. Why did she have to tell me to shower before she would examine me? I remember that I felt very hurt and angry. I really wondered why she worked in that hospital, since the patients were mostly native.

Discrimination usually results from viewing others as "lesser persons" and failing to acknowledge the inherent worth of others (Howard, 1975, p. 78). By describing contrary cases that are indicative of discriminatory treatment, informants confirmed that ethnic stereotyping and prejudice toward aboriginal people remain prevalent (Frideres, 1994; Sherley-Spiers, 1989).

Failure to consider the patient's perspective. This negative characteristic was seen by the informants as having serious clinical implications, especially for patients receiving services in southern secondary or tertiary hospitals. Disregard for the patient's perception of the problem could have detrimental clinical implications. An informant explained:

A nurse isn't showing me respect when she won't even let me explain what I already know about myself or how my children are feeling. For example, one time I brought my baby to the [nursing] station and the nurse didn't believe that there was anything wrong. I knew there was something wrong, though.... Well, in the end we ended up having to medivac [evacuate by airplane] my baby. She was all right after all, but it was very annoying, and she could have ended up worse.

Informants acknowledged that cross-cultural interactions create a potential for clinical misunderstanding, but added that it is possible for providers to convey a desire to understand their patients. Moreover, failure to do so could create dangerous clinical situations.

Failure to provide privacy for patients. Respect for human dignity was related, by the informants, to the issue of privacy afforded to patients, especially during procedures requiring bodily exposure. Failure to do so conveyed a sense of disrespect for the patient's sense of modesty, as described in the following case:

My mom came to the nursing station with a respiratory problem and some chest pains and I came with her to interpret. In the clinic the

nurse took her clothes off, just like that.... That is very disrespectful for the elders because they are very self-conscious of their body.... It would have been better to ask her if it was O.K. to undress her with the family present or explain why she had to take her shirt off or something... After, she [her mother] was really quiet. I knew she was hurt. She didn't say much about what happened but I knew she was thinking about it.

In the above scenario, the nurse could have conveyed a sense of respect by asking the patient to choose the manner in which she should be exposed. In this way, she would have conveyed both the intention to protect the elder's sense of dignity and the intention to take her choice into consideration.

Failure to provide adequate explanations. Informants described how interactions became dehumanizing when patients were not offered explanations and information concerning their well-being. One informant related her experience in a southern hospital:

When I went to the specialist eye doctor for the first time...[he] put these drops in my eyes, and pinned my head in this brace for quite a long time. It wasn't that;... It was the way he went about doing it that showed he didn't respect me. He would just mumble everything he said to me, and he wouldn't speak clearly... I never knew what he was going to do next... I remember wanting to leave his office when I saw how he was treating me... And I thought of all the elderly people that get sent to him... and how they especially wouldn't understand what was going on.... After he was finished, I asked him what condition my eyes were in, and all he said was that he would send a report to the nursing station. I felt very uneasy and sort of hurt because he didn't want to tell me anything.

Informants felt that in some cases they were not offered the same degree of information or choice regarding their health care that people from other groups were offered. In this context, failure to provide adequate information or explanations may reflect providers' tendencies to view First Nations patients as "people without options" (Howard, 1975, p. 64). Patients – especially elders – who tended to be relatively complacent with providers' suggestions for treatment were seen as particularly vulnerable.

Negative nonverbal behaviours. Informants explained that nonverbal behaviours can be powerful indicators of respect or lack of respect. The effect of tone of voice on a patient was described by an informant:

When elders come to the clinic, some nurses can be rough or treat the elder like a child. This is very offensive to the family, because they have a high respect for their elders. For example, if an elder doesn't

understand the instruction "take a big breath" in English, the nurse might say it again in a harsh tone of voice. We would never speak to our elders in that way, in that tone of voice.

In such cases, providers can convey a sense of valuing or devaluing their patients through nonverbal messages. Morse, Young, and Swartz (1991) and O'Neil (1989) describe similar findings, noting that attitudes of paternalism or superiority are conveyed to aboriginal patients through body posture and positioning, especially when patients are not English-speaking. The consequences of intonation and other nonverbal behaviours may be far-reaching, if they are perceived as disrespectful, and may jeopardize the efficacy of health-care interactions.

Identifying the characteristics of lack of respect described in contrary cases serves to highlight those characteristics that are distinctive of the model cases (Schwartz-Barcott & Kim, 1993). In the following section, the implications of the findings in relation to nursing practice with First Nations patients are discussed.

Discussion and Nursing Implications

A major function of this study was to validate the significance of respect as a powerful component of clinical interactions between patients and health-care providers. The perspectives of the key informants provide insights into how Cree-Ojibway patients may view clinical interactions with Western providers. The findings also demonstrate ways in which clinical interactions were interpreted by clients in terms of the underlying messages conveyed by providers.

Informants' descriptions frequently related to their experiences as First Nations people interacting with Western providers. Several cases emphasized the need for nurses and other health-care providers to consider the implications of their behaviour in light of historical and current factors influencing interactions with First Nations patients. According to O'Neil (1989), failing to critique clinical interactions in light of their sociopolitical context perpetuates the legacy of colonialism in health care for aboriginal people in Canada. Although the findings are not meant to be generalized to other First Nations groups, they are considered valid for the key informants interviewed, and serve as a stimulus for considering similar factors that affect clinical interactions with other client groups or individuals.

A second major function of the findings was to make explicit what was implicit in the literature concerning respect: that respect is an essential concept for nursing, and that the qualities of respect reflect

ethical concerns. Ethical questions arising from this study relate to the ways in which Cree-Ojibway informants felt they were treated during clinical interactions. Were they treated as persons who were inherently worthy, and equal to others in principle, or were they treated in a discriminatory manner? Were they offered the same amount of information offered to others regarding their health care? Did they receive care in consideration of their unique situation and cultural circumstances? Were they offered an appropriate degree of privacy? Were they treated in ways that reinforce the paternalism and power frequently exercised by health-care providers in the past? Although it was beyond the scope of the study to provide answers, the above questions highlight some ethical concerns raised during analysis of the data.

The characteristics of respect derived from informants' descriptions of respectful interactions suggest that respect has tangible observable indicators that patients can discern in the behaviours of nurses and other health-care providers. As more data are collected about patients' experiences of respect, opportunities to compare meanings and indicators of respect in terms of cultural specificity or universality will arise. The challenge, then, will be to incorporate respectful interactions into nursing practice, consistent with clients' expectations (Egan, 1994).

In summary, the in-depth interviewing approach used in this study fulfilled its intended purpose: the collection of rich descriptive data that reflected the perspectives of key informants (Spradley, 1979). By exploring the meaning of respect from the perspective of Cree-Ojibway informants, the study was able to highlight the value and significance of respectful clinical interactions for this client group. The findings illustrate the need for nurses and other providers to be aware of sociopolitical factors influencing the nature and quality of clinical interactions between First Nations clients and Western health-care providers. As future research examines the significance of respectful interactions, nursing can realize its commitment to the values of status equality, inherent worth, and the dignity of persons.

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Comportements de promotion de la santé d'étudiantes de première année au baccalauréat en sciences infirmières : Étude pilote

**Madeleine Clément, Louise Bouchard,
Louis W. Jankowski et Michel Perreault**

The goal of this pilot study was to test the usefulness of Pender's (1987) theoretical model in predicting the adoption of health-promotion behaviours in 176 first-year undergraduate nursing students. Hierarchical regression analysis indicated that the perception of self-efficacy, perception of one's state of health, the influence of professors, and place of birth are predictive variables of health-promoting behaviours in this group. The results of this study suggest, among other things, that it is important for professors to use strategies that foster and support students' confidence in their ability to commit to health-promoting behaviours. A longitudinal study currently in progress will examine whether a health-oriented program significantly influences the adoption of health-promotion behaviours in nursing students during their university education.

Le but de cette étude pilote était de tester l'utilité du modèle théorique de Pender (1987) à prédire l'adoption de comportements de promotion de la santé chez 176 étudiantes de première année au baccalauréat en sciences infirmières. L'analyse de régression multiple hiérarchique a démontré que la perception de l'auto-efficacité, la perception de l'état de santé, l'influence des professeurs et le lieu de naissance sont des variables prédictives des comportements de promotion de la santé de cette population. Les résultats de cette étude suggèrent, entre autres, l'importance pour les professeurs d'utiliser des stratégies susceptibles de développer et de maintenir la confiance des étudiantes dans leur habileté à s'engager dans des comportements de promotion de la santé. Une étude longitudinale, présentement en cours, permettra de vérifier si un programme centré sur la santé influence de façon significative l'adoption de comportements de santé chez les étudiantes en sciences infirmières au moment de leur formation universitaire.

La philosophie des soins de santé primaires, préconise la promotion de la santé par le biais d'une participation active de la clientèle ciblée (World Health Organisation, 1979). En adoptant cette philosophie dans

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leur pratique professionnelle, les infirmières¹ assistent les clients dans leur apprentissage personnel à s'engager dans des comportements de santé, c'est-à-dire à s'actualiser, à prendre leurs responsabilités en matière de santé, à faire de l'activité physique, à bien se nourrir, à maintenir des relations intimes et à gérer leur stress. Les infirmières sont donc invitées à modifier leur rôle traditionnel de soignantes centrées sur la maladie, le déficit ou la perte pour un rôle d'éducatrices et de collaboratrices (Novak, 1988; Richardson & Petrarca, 1990) et à mettre en valeur les forces et le potentiel des clients. Or, pour remplir ce rôle, les infirmières doivent d'abord elles-mêmes s'engager dans des comportements de promotion de la santé et être des modèles de santé (Boyd, 1988; Clarke, 1991; Soeken, Bausell, Winklestein & Carson, 1989; Kelley Walsh, VandenBosch & Boehm, 1989).

Des études démontrent que les comportements de promotion de la santé des infirmières ne sont pas toujours adéquats et qu'il faut remonter au contexte académique dans lequel ces infirmières ont été formées pour mieux comprendre cette situation. Les résultats d'une recherche américaine, menée auprès de 530 étudiantes bachelères en sciences infirmières de première et troisième années, rapportent que ces dernières ne semblent pas intégrer les connaissances sur la santé transmises dans leur programme (Camooso et al., 1980). En effet, une dichotomie entre l'enseignement aux clients et la pratique personnelle des étudiantes infirmières face à leurs comportements de santé a été observée. Ces auteurs suggèrent qu'il faut plus que des connaissances pour modifier les attitudes et les comportements de santé. Ils se demandent également dans quelle mesure l'environnement éducatif soutient la modification des comportements de santé. Dans une recherche canadienne faite auprès de 211 étudiantes en sciences infirmières, Sabina-McVety, Booth, Orban et Richards (1988) identifient des obstacles à la pratique de l'exercice physique, soit le manque de temps, d'énergie, de discipline ainsi que d'installations sportives adéquates. Richter, Malkiewicz et Shaw (1987), du Colorado, ont étudié le mode de vie de trois groupes d'étudiantes bachelères en sciences infirmières, dont l'un avait reçu un cours sur la promotion de la santé. Ces auteurs rapportent une détérioration du mode de vie dans les trois groupes et mentionnent que le manque de temps rendait conflictuel l'acquisition des connaissances et leur mise en pratique. Dittmar, Haughey, O'Shea et Brasure (1989) ont conduit une recherche auprès de 1081 étudiantes en sciences infirmières de diverses universités américaines et rapportent que l'étudiante type n'affiche que la moitié des comportements de santé attendus d'elle et constitue, de ce fait, un piètre exemple de santé. Les auteurs suggèrent la nécessité pour les infirmières professeuses d'uni-

versité d'exercer plus d'influence sur les comportements de promotion de la santé des étudiantes. Frachel (1984), pour sa part, s'interroge sur l'habileté des éducatrices à agir comme modèle de santé auprès des étudiantes infirmières.

Coop (1984) rapporte la pratique de comportements de santé, tant chez les professeures que chez les étudiantes en sciences infirmières, à la suite de l'adoption d'un curriculum orienté vers la promotion de la santé. Des exemples de pratiques professionnelles, conçues selon le *McGill model*, mettent en évidence le transfert des connaissances théoriques à des situations cliniques (Feeley & Gerez-Lirette, 1992; Murphy, 1994). Dans cette optique, Grossman et Hooton (1993) rappellent l'importance, pour les milieux universitaires et cliniques, d'adopter un même cadre conceptuel. Une étude comparative, conduite par Hadubiak (1986) en Saskatchewan auprès d'étudiantes en sciences infirmières et en études financières, soutient l'hypothèse que l'acquisition de connaissances en matière de santé mène à l'adoption de comportements sains. Coons (1989), dans une étude conduite auprès d'étudiantes qui recevaient de l'information au moment d'une visite au service de santé de l'Université d'Arizona, rapporte des changements positifs dans leurs attitudes et leurs croyances.

Le Ministère de la Santé nationale et du Bien-être (1987) suggère que la période d'études universitaires est un moment idéal pour l'enseignement de la promotion de la santé. L'étudiante universitaire vit une période de transition importante en route vers une plus grande autonomie, y compris une responsabilité accrue face à ses propres comportements de santé (Green, 1984). Il semble cependant, d'après les études recensées ci-dessus que les étudiantes en sciences infirmières n'adoptent pas toujours des comportements sains durant leur formation universitaire et que le contexte académique n'exerce pas toujours une influence positive sur l'adoption de ces comportements. D'autres variables que le contexte académique peuvent expliquer l'adoption de comportements de promotion de la santé comme le propose le modèle théorique de promotion de la santé de Pender (1987).

Modèle théorique

Pender (1987), dans son modèle de promotion de la santé, propose trois catégories de variables : des variables cognitives-perceptuelles, des variables modifiantes et des déclencheurs d'action. Les variables cognitives-perceptuelles sont identifiées comme exerçant une force motivatrice directe sur les comportements de santé. Cette catégorie comprend : l'importance de la santé, le contrôle perçu de la santé, la

perception de l'auto-efficacité, la définition de la santé, la perception de l'état de santé et la perception des obstacles et des avantages à s'engager dans des comportements de promotion de la santé. Les variables modifiantes, quant à elles, exerceraient une influence indirecte sur ces comportements par l'intermédiaire des mécanismes cognitifs-perceptuels. Il s'agit des caractéristiques démographiques et biologiques, des influences interpersonnelles ainsi que des facteurs situationnels et comportementaux. Les déclencheurs d'action sont soit internes, tel le désir de réaliser son potentiel de croissance, soit externes, provenant de l'environnement et des médias. Pender (1987) définit les comportements de promotion de la santé comme toutes les activités intégrées au mode de vie et initiées par l'individu pour maintenir son bien-être et favoriser l'actualisation de son potentiel. Ces activités sont celles associées à l'actualisation de soi, à la responsabilité envers sa santé, à l'activité physique, à une saine nutrition, au soutien interpersonnel et à la gestion du stress. Pour développer son modèle, Pender s'est inspirée de plusieurs théories cognitives et de recherches centrées sur les croyances, perceptions, valeurs et attitudes prédictives des comportements de santé, dont la théorie de l'apprentissage social de Bandura (1986).

Jusqu'à présent, plusieurs chercheuses ont examiné empiriquement la relation entre certaines variables du modèle de Pender – importance de la santé, contrôle perçu de la santé, perception de l'auto-efficacité, perception de l'état de santé, caractéristiques socio-démographiques – et les comportements de promotion de la santé auprès d'adultes et de personnes âgées en santé, malades ou handicapés (Bouchard, 1993; Duffy, 1988; Frank-Stromborg, Pender, Walker & Sechrist, 1990; Pender, Walker, Sechrist & Frank-Stromborg, 1990; Rodrigue, 1992; Speake, Cowart & Pellet, 1989; Stuifbergen & Becker, 1994; Waller, Crow, Sands & Becker, 1988; Walker & Volkan, 1987; Walker, Volkan, Sechrist & Pender, 1988; Weitzel, 1989). Même si Pender (1987) souligne l'importance de considérer les facteurs interpersonnels et situationnels dans le maintien des comportements de santé, aucune étude examinant l'effet prédictif de ces derniers n'a été relevée par les auteurs de la présente étude. Enfin, à la connaissance des auteurs, aucune étude n'a examiné les comportements de promotion de la santé tels que définis par Pender (1987) chez une population d'étudiantes.

La présente étude pilote se propose donc de tester l'utilité du modèle de Pender à prédire l'adoption de comportements de promotion de la santé chez des étudiantes en sciences infirmières. De façon plus spécifique, le but de l'étude pilote était d'examiner si les variables **contrôle perçu de la santé, importance de la santé, perception de**

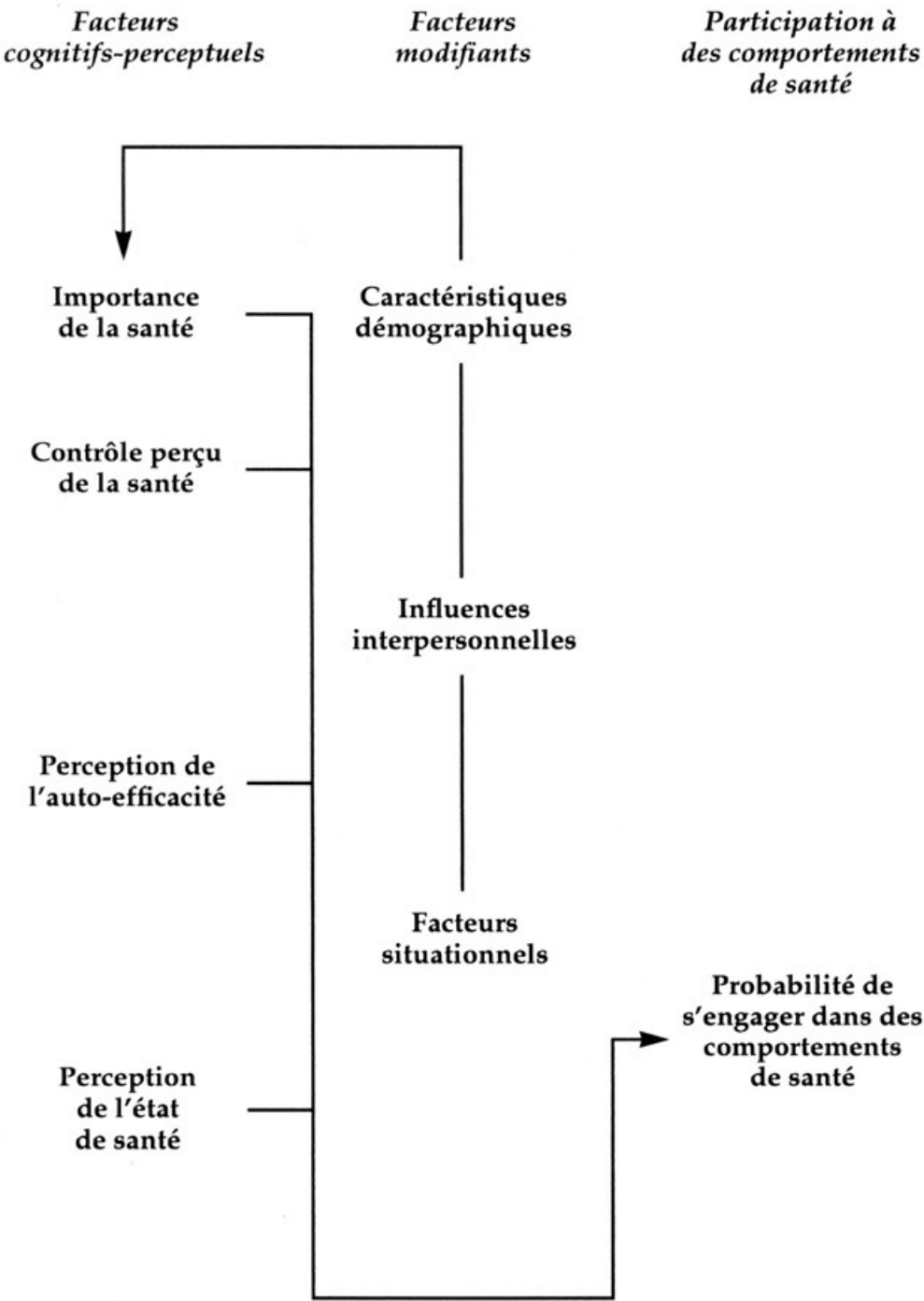
l'auto-efficacité, perception de l'état de santé, influences interpersonnelles, contexte académique et les caractéristiques démographiques **âge, genre, niveau d'études terminées, revenu annuel, mode de vie et lieu de naissance** sont prédictives des comportements de promotion de la santé chez les étudiantes de première année au baccalauréat en sciences infirmières (voir la figure 1).

Le **contrôle perçu de la santé**, défini comme la croyance qu'a l'individu face au contrôle qu'il peut exercer sur sa santé, est conceptualisé par le construit foyer de contrôle qui émane de la théorie de l'apprentissage social de la personnalité élaborée par Rotter (1966). Cette théorie, lorsqu'elle est appliquée spécifiquement dans le contexte de la santé, stipule qu'un individu ayant une orientation interne de foyer de contrôle croit que la santé est sous son contrôle personnel, tandis que l'individu ayant une orientation externe croit que la santé est sous le contrôle de la chance, du hasard ou du pouvoir des autres. Il est démontré dans certaines études que l'individu ayant une orientation interne de foyer de contrôle spécifique à la santé agit positivement en vue de maintenir ou d'améliorer sa santé (Dishman, Ickes & Morgan, 1980; Lakin, 1988; O'Connell & Price, 1982; Toner & Manuk, 1979). Cependant, le lien empirique entre les comportements de promotion de la santé et cette orientation interne est loin d'être constant dans d'autres études (Frank-Stromborg et al., 1990; Speake et al., 1989; Walker & Volkan, 1987; Waller et al., 1988; Weitzel, 1989). Selon Wallston (1991), cette inconsistance provient d'une compréhension incomplète de la théorie originale de Rotter (1966). Selon lui, le foyer de contrôle en matière de santé ne peut être isolé de la valeur que représente la santé. Prédire que l'individu ayant une orientation interne de foyer de contrôle s'engagerait dans plus de comportements de santé sans savoir ce que représente pour lui la santé est une prédiction hâtive. C'est pourquoi, dans la présente étude, les construits foyer de contrôle et importance de la santé sont étudiés de façon interactive, comme le propose Wallston (1991). L'**importance de la santé** est définie comme la valeur relative que l'individu accorde à sa santé par rapport à d'autres valeurs personnelles.

La **perception de l'auto-efficacité** est définie comme la disposition globale de l'individu à se percevoir capable d'organiser et d'exécuter un plan d'actions dans différents domaines (Bandura, 1986). Elle n'est pas centrée sur les aptitudes de l'individu mais plutôt sur ses croyances quant à ce qu'il peut faire avec les aptitudes qu'il possède. Un individu qui a une grande auto-efficacité croit pouvoir généraliser les succès connus dans les expériences antérieures à de nouvelles situations et réussir ainsi un comportement visé. Plusieurs études se servant de

Figure 1

Variables retenues du modèle de promotion de la santé de Pender (1987)



Note : Traduction et adaptation de *Health Promotion in Nursing Practice* (2e éd., p. 58), par N. J. Pender, 1987, Norwalk : Appleton and Lange

Pender (1987) comme modèle conceptuel ont démontré que l'effet prédictif de cette variable est la plupart du temps plus élevé que celui d'autres variables (Pender et al., 1990; Stuifbergen & Becker, 1994; Waller et al., 1988; Weitzel, 1989).

La **perception de l'état de santé** est définie comme l'estimation que l'individu fait de son état de santé. La perception positive de l'état de santé a été un facteur prédictif des comportements de promotion de la santé dans un certain nombre d'études (Duffy, 1988; Speake et al., 1989; Frank-Stromborg et al., 1990; Pender et al., 1990; Waller et al., 1988; Weitzel, 1989).

Les **influences interpersonnelles** sont définies comme les attentes et les attitudes des personnes significatives (parents, amis, conjoint, enfants) face à l'adoption de comportements de santé. Le facteur situationnel **contexte académique** tient compte de l'environnement physique et humain à l'intérieur duquel évoluent les étudiantes universitaires.

Méthode

Échantillon et milieu

L'échantillon est constitué de 176 étudiantes inscrites en première année au baccalauréat en sciences infirmières. Les femmes occupent une proportion de 80,5 % de l'échantillon. La plupart des participantes sont âgées de 18 à 25 ans (79 %), de langue maternelle française (81,7 %), nées au Québec (78,1 %) et ont terminé des études collégiales en sciences de la santé (80,5 %).

L'étude a été conduite pendant le trimestre d'automne 1991. À la fin d'un cours obligatoire, les étudiantes ont été informées verbalement, par un des chercheurs, du but de l'étude, de l'anonymat des participants, de la confidentialité des réponses données et de leur liberté absolue de participer ou non à cette étude pilote. Les étudiantes participantes (176/200) ont rempli sur place un questionnaire constitué de sept instruments de mesure (~30 minutes) qu'elles ont ensuite déposé dans une boîte placée près de la porte. Seuls les chercheurs ont eu accès aux données pour fins d'analyse. L'étude a été approuvée par un comité sectoriel universitaire de déontologie en sciences de la santé.

Instruments de mesure

Échelle de foyer de contrôle spécifique à la santé². Cette échelle, conçue pour mesurer le contrôle perçu de la santé, est une version française du *Health Locus of Control (HLC)*, développée dans sa version originale par Wallston, Wallston, Kaplan et Maides (1976). Cet instrument comprend 11 énoncés de type Likert de six choix et mesure, de façon distincte, les deux orientations du foyer de contrôle, interne et externe, composées respectivement de cinq et de six éléments. Plus le score est élevé, plus le foyer de contrôle de l'individu a une orientation interne ou externe, selon le cas. Le coefficient α de la version anglaise originale est de 0,72 tandis que celui de la version traduite en français est de 0,68. Basé sur Nunnally (1978), ce coefficient de 0,68 est jugé acceptable selon les critères établis par les auteurs de la présente étude.

Échelle de valeurs. L'importance de la santé a été mesurée à l'aide de l'Échelle de valeurs, version française du *Value Survey*, développée dans sa version originale par Wallston, Maides et Wallston (1976) à partir du *Rokeach's Terminal Value Survey* (Rokeach, 1973). Cette échelle consiste en une liste de dix valeurs que l'individu doit classer par ordre d'importance : 1 correspond à la valeur la plus importante et 10, à la valeur la moins importante. Wallston (1986, voir Weitzel, 1989) rapporte que le *Value Survey* a reçu une appréciation acceptable de validité de contenu et de concomitance. Un coefficient test-retest de 0,70 a été calculé pour la version originale de l'échelle de Rokeach (Robinson & Shaver, 1973). Les scores obtenus à l'Échelle de valeurs ont été inversés afin que le chiffre le plus élevé corresponde à la valeur la plus importante.

Échelle d'auto-efficacité. Cet instrument mesurant la perception de l'auto-efficacité est une version française du *Self-Efficacy Scale*, développé dans sa version originale par Sherer, Maddux, Mercandante, Prentice-Dunn, Jacobs et Rogers (1982), et comprend 17 énoncés de type Likert de cinq choix. La variation possible des scores est de 17 à 85. Plus le score augmente, plus grande est la perception de l'auto-efficacité. Les auteurs de la version originale rapportent un coefficient α de 0,86. Dans la présente étude, le coefficient α obtenu pour la version française est de 0,80. Le choix d'un instrument mesurant globalement la perception de l'auto-efficacité se justifie par le grand nombre de comportements de santé à l'étude. Selon Wallston (1991), le construit global d'auto-efficacité peut prédire un ensemble de comportements, tandis que le construit spécifique d'auto-efficacité ne peut s'appliquer qu'à la prédiction d'un nombre restreint de comportements spécifiques.

Évaluation de l'état de santé. Cet instrument, destiné à mesurer la perception de l'état de santé, est composé d'un élément énoncé ainsi : «Par comparaison à d'autres personnes de votre âge, comment évaluez-vous votre présent état de santé?» Les scores peuvent varier entre 1 et 5; plus le chiffre est bas, plus il correspond à la perception subjective d'un meilleur état de santé. Cet élément a été utilisé dans l'enquête Santé du gouvernement du Québec (1987). Pender et al. (1990) ont affirmé que ce type de question est fidèle et valide, se basant sur l'analyse de nombreuses études effectuées par Ware, Davis-Avery et Donald (1978). Les scores obtenus à l'Échelle d'état de santé ont été inversés afin que le chiffre le plus élevé corresponde à la perception subjective du meilleur état de santé.

Échelle des influences interpersonnelles. Cette échelle de type Likert de cinq choix est constituée de deux énoncés mesurant les attentes et les attitudes des proches face à l'adoption de comportements de santé. La variation possible des scores est de 2 à 10, le nombre 10 indiquant une plus grande influence interpersonnelle. Le contenu de cet instrument, développé par Clément, Bouchard, Jankowski et Perreault (1992), a été validé par un jury de dix experts. Le coefficient α obtenu est de 0,87.

Échelle du Contexte Académique. Cet instrument, développé par Clément et al. (1992), comprend deux dimensions : les exigences académiques et l'influence des professeurs face à l'adoption de comportements de santé. Chacune de ces dimensions est mesurée par une échelle de deux énoncés de type Likert de cinq choix. Les scores de chacune des dimensions peuvent varier entre 2 et 10, le nombre 10 indiquant une plus grande exigence académique ou une plus grande influence des professeurs, selon le cas. Le contenu de cet instrument a été validé par un jury de dix experts. Le coefficient α obtenu est de 0,86 pour les exigences académiques et de 0,87 pour l'influence des professeurs.

Profil d'un mode de vie sain. La fréquence des comportements spécifiques de promotion de la santé a été mesurée à l'aide de l'instrument Profil d'un mode de vie sain. Cet instrument a été développé dans la version originale anglaise *Health-Promoting Lifestyle Profile* par Walker, Sechrist et Pender (1987) et comprend 48 énoncés de type de Likert de six choix répartis en six dimensions : actualisation de soi, responsabilité envers sa santé, activité physique, saine nutrition, soutien interpersonnel et gestion du stress. La variation des scores pour chacune des dimensions et pour l'ensemble de l'instrument est de 1 à 4, le chiffre 4 indiquant une plus grande fréquence des comportements de santé.

Les scores sont calculés en fonction de la moyenne des réponses individuelles aux 48 énoncés ou au nombre d'énoncés dans chacune des dimensions. Walker et al. (1991, voir Rodrigue, 1992) préconisent le calcul d'une moyenne plutôt que d'une somme afin de respecter l'utilisation métrique des réponses aux énoncés et de permettre une meilleure comparaison entre les dimensions. Le coefficient α de la version anglaise originale est de 0,92 pour l'ensemble de l'instrument et de 0,70 à 0,90 pour les dimensions. Le coefficient α de la version traduite en français est de 0,92 pour l'ensemble de l'instrument et de 0,71 à 0,87 pour les dimensions.

Questionnaire de données démographiques. Ce questionnaire a recueilli de l'information sur l'âge, le sexe, le niveau d'études terminées, le revenu annuel, le mode de vie et le lieu de naissance des étudiantes. Dans les recherches portant sur la santé, ces variables ont souvent été prédictives des comportements de santé de diverses populations (Duffy, 1988; Frank-Stromborg et al., 1990; Walker et al., 1988; Weitzel, 1989).

Résultats

Les données ont été résumées par statistiques descriptives et inférentielles, y compris des moyennes, des écart types et des corrélations de Pearson. L'analyse de régression multiple hiérarchique a été utilisée afin de vérifier la contribution respective des variables cognitives-perceptuelles et modifiantes sur les comportements de promotion de la santé des étudiantes infirmières et de vérifier le modèle théorique retenu. Le seuil de signification établi était de 0,05.

La variation des scores possibles et obtenus, les moyennes et les écarts types pour les variables cognitives-perceptuelles et modifiantes ainsi que pour la variable comportements de promotion de la santé sont présentés au tableau 1. Les deux dimensions du Profil d'un mode de vie sain ayant obtenu les scores moyens les plus élevés sont celles du soutien interpersonnel (\bar{x} = 3,16) et de l'actualisation de soi (\bar{x} = 3,21). Par ailleurs, les dimensions responsabilité envers sa santé (\bar{x} = 2,13) et activité physique (\bar{x} = 2,41) ont obtenu les scores moyens les plus bas. L'élaboration d'une matrice de corrélation a permis d'examiner la multicollinéarité des variables cognitives-perceptuelles et modifiantes à l'étude. Toutes les corrélations étaient sous 0,68, indiquant qu'il n'y avait pas de redondance entre ces variables (Tabachnick & Fidell, 1989).

Tableau 1

Variation possible des scores, variation des scores obtenus, moyenne et écart type en regard des variables de l'étude (n=176)

Variables	Variation possible des scores	Variation des scores obtenus	\bar{x}	s
Variables cognitives – perceptuelles				
Importance de la santé	1-10	1-10	7,04	2,03
Contrôle perçu de la santé				
Interne	5-30	7-30	17,25	5,73
Externe	6-36	6-33	16,17	5,11
Perception de l'auto-efficacité	17-85	36-83	66,39	8,90
Perception de l'état de santé	1-5	1-5	3,58	0,97
Variables modifiantes				
Influence interpersonnelle	2-10	2-10	6,71	1,78
Contexte académique				
Exigences académiques	2-10	2-10	5,64	1,83
Influence des professeurs	2-10	2-10	6,65	1,38
Comportements de promotion de la santé				
Responsabilité envers sa santé	1-4	1,09-3,64	2,13	0,47
Activité physique	1-4	1-4	2,41	0,86
Gestion du stress	1-4	1-4	2,58	0,59
Saine nutrition	1-4	1,17-4	2,94	0,62
Soutien interpersonnel	1-4	1,67-4	3,16	0,56
Actualisation de soi	1-4	2,14-4	3,21	0,43
Total	1-4	1,85-3,69	2,78	0,38

Afin de vérifier la contribution des variables cognitives-perceptuelles et modifiantes à la prédiction de l'adoption de comportements de promotion de la santé, une analyse de régression multiple hiérarchique a été effectuée (Tabachnick & Fidell, 1989). Toutes les variables ont été introduites selon l'ordre du modèle illustré à la figure 1. Dans une première étape, les variables cognitives-perceptuelles ont été introduites dans l'équation car, théoriquement, elles exerceraient une influence directe sur les comportements de promotion de la santé. Les résultats de cette analyse (voir le tableau 2) indiquent que l'ensemble des variables cognitives-perceptuelles expliquent 38 % de la variance des comportements de promotion de la

santé. Cependant, les deux seuls prédicteurs cognitifs-perceptuels significatifs ($p < 0,001$) de ces comportements sont la perception de l'auto-efficacité ($\beta = 0,49$) et la perception de l'état de santé ($\beta = 0,27$). La variable interactive contrôle perçu de la santé \times importance de la santé ne s'est pas avérée être un prédicteur significatif des comportements de promotion de la santé.

Tableau 2

Analyse de régression multiple hiérarchique entre les variables cognitives-perceptuelles, les variables modifiantes et la variable « comportements de promotion de la santé »

Variables	Comportements de promotion de la santé	
	β	p
ÉTAPE 1		
Variables cognitives-perceptuelles		
Foyer interne \times importance de la santé	-0,02	0,81
Foyer externe \times importance de la santé	0,07	0,39
Perception de l'auto-efficacité	0,49	<0,001
Perception de l'état de santé	0,27	<0,001
R^2 ajusté = 0,38 $F = 25,05$ Sig $F = p < 0,001$ $dl = (4, 150)$		
ÉTAPE 2		
Variables cognitives-perceptuelles		
Foyer interne \times importance de la santé	-0,03	0,68
Foyer externe \times importance de la santé	0,06	0,46
Perception de l'auto-efficacité	0,46	<0,001
Perception de l'état de santé	0,26	<0,001
Variables modifiantes		
Influences interpersonnelles	0,05	0,31
Influence des professeurs	0,13	0,04
Exigences académiques	-0,09	0,15
Genre	0,09	0,15
Âge	-0,06	0,46
Niveau d'études terminées	0,06	0,32
Revenu personnel brut	0,02	0,79
Mode de vie	-0,03	0,59
Lieu de naissance	0,18	0,01
R^2 ajusté = 0,42 $F = 9,66$ Sig $F = p < 0,001$ $dl = (13, 141)$		
ΔR^2 ajusté = 0,04 $\Delta F = 2,09$ Δ Sig $F = p < 0,03$		

Puis, l'équation a été estimée à nouveau en introduisant les variables modifiantes, qui exercent théoriquement un effet indirect sur les comportements de promotion de la santé par l'intermédiaire des mécanismes cognitifs-perceptuels. Ces variables insérées en deuxième dans l'équation de régression, ajoutent 4 % au coefficient de détermination du modèle. La seule variable modifiante prédictive ($p < 0,05$) est l'influence des professeurs ($\beta = 0,13$). La seule caractéristique démographique prédictive ($p < 0,01$) est le lieu de naissance ($\beta = 0,18$). Aucune des autres variables modifiantes, soit les influences interpersonnelles, les exigences académiques et les caractéristiques démographiques (âge, sexe, niveau d'études terminées, revenu et mode de vie), n'ont contribué de façon significative à la prédiction des comportements de promotion de la santé des étudiantes infirmières.

Tableau 3

Analyse de régression multiple hiérarchique entre les variables cognitives-perceptuelles et les variables modifiantes contribuant de façon significative à chacune des dimensions de la variable « comportements de promotion de la santé »

Variables	Dimensions des comportements de promotion de la santé	
	β	p
ACTUALISATION DE SOI		
Variables cognitives-perceptuelles		
Perception de l'auto-efficacité	0,58	<0,001
Perception de l'état de santé	0,16	0,01
R^2 ajusté = 0,42 Sig F = $p < 0,001$		
RESPONSABILITÉ ENVERS SA SANTÉ		
Variables cognitives-perceptuelles		
Perception de l'auto-efficacité	0,25	<0,001
R^2 ajusté = 0,13 Sig F = $p < 0,001$		
Variables modifiante		
Sexe	0,19	0,01
R^2 ajusté = 0,19 Δ Sig F = $p < 0,018$		
ACTIVITÉ PHYSIQUE		
Variables cognitives-perceptuelles		
Perception de l'auto-efficacité	0,17	0,01
Perception de l'état de santé	0,32	<0,001
R^2 ajusté = 0,17 Sig F = $p < 0,001$		
Variables modifiante		
Influence des professeurs	0,20	0,008
Exigences académiques	-0,14	0,05
Genre	-0,15	0,05
Âge	-0,28	0,006
R^2 ajusté = 0,24 Δ Sig F = $p < 0,009$		

Tableau 3 (suite)		
SAINE NUTRITION		
Variables cognitives-perceptuelles		
Perception de l'auto-efficacité	0,23	0,003
Perception de l'état de santé	0,23	0,001
R^2 ajusté = 0,15 Sig $F = p < 0,001$		
SOUTIEN INTERPERSONNEL		
Variables cognitives-perceptuelles		
Perception de l'auto-efficacité	0,34	<0,001
R^2 ajusté = 0,13 Sig $F = p < 0,001$		
Variables modifiante		
Lieu de naissance	0,27	0,001
R^2 ajusté = 0,22 Δ Sig $F = p < 0,002$		
GESTION DU STRESS		
Variables cognitives-perceptuelles		
Perception de l'auto-efficacité	0,26	0,001
Perception de l'état de santé	0,24	0,003
Foyer externe \times importance de la santé	-0,21	0,04
R^2 ajusté = 0,16 Sig $F = p < 0,001$		

Le tableau 3 présente les résultats des analyses de régression multiple hiérarchique entre les variables cognitives-perceptuelles, les variables modifiantes et chacune des dimensions des comportements de promotion de la santé. Seules les variables contribuant de façon significative à la variance de chacun des comportements de promotion de la santé figurent dans ce tableau. Il est intéressant de constater que la variable perception de l'auto-efficacité assure une prédiction constante pour tous les comportements de promotion de la santé. La perception de l'état de santé joue un rôle prédictif important dans la fréquence des comportements reliés à l'activité physique. La variable interactive «contrôle perçu de la santé \times importance de la santé» est un prédicteur de la gestion du stress. Un foyer externe interagissant avec une perception peu importante de la santé est un prédicteur négatif de la gestion du stress. Le contexte académique, y compris l'influence des professeurs et les exigences académiques, s'avère être une variable prédisant l'activité physique des étudiantes. Le fait d'être une femme est un prédicteur des comportements de responsabilité envers sa santé tandis que le fait d'être un homme est un prédicteur des activités physiques. Également, plus on est jeune, plus on s'engage significativement dans des activités physiques. Enfin, être né au Québec est un prédicteur significatif des comportements reliés au soutien interpersonnel.

Discussion des résultats

Modèle de promotion de la santé de Pender

Le modèle de Pender (1987), qui a servi d'assise théorique à cette étude, explique un pourcentage relativement élevé de la variance des comportements de promotion de la santé d'étudiantes en sciences infirmières de niveau universitaire. Ce modèle postule, entre autres, que les variables cognitives-perceptuelles exercent une force motivatrice directe sur les comportements de promotion de la santé et que les variables modifiantes n'exercent qu'une influence indirecte sur ces mêmes comportements. Dans la présente étude, une grande proportion du pourcentage de la variance des comportements de promotion de la santé est expliquée par les deux variables cognitives-perceptuelles « perception de l'auto-efficacité » et « perception de l'état de santé ». La variable « contexte académique : influence des professeurs » et la caractéristique démographique « lieu de naissance » se sont avérées être les seules variables modifiantes prédictives des comportements de promotion de la santé. La contribution de ces dernières est modérée, ce qui était attendu étant donné l'influence indirecte de ces variables théoriquement postulée par Pender (1987).

Variables cognitives-perceptuelles

Lorsqu'on examine de plus près les poids bêta de chacune de ces variables cognitives-perceptuelles, il en ressort que la perception de l'auto-efficacité est le meilleur prédicteur de l'étude. Le pouvoir explicatif de l'auto-efficacité dans l'engagement de comportements de promotion de la santé corrobore les résultats de plusieurs auteurs qui ont utilisé Pender comme modèle de prédiction des comportements de promotion de la santé (Pender et al., 1990; Stuifbergen & Becker, 1994; Waller et al., 1988; Weitzel, 1989). La perception de l'auto-efficacité est une variable prédictive non seulement pour l'ensemble des comportements de promotion de la santé mais aussi pour chacun des comportements examinés individuellement.

Il semble donc que, lorsque les étudiantes au baccalauréat en sciences infirmières sont confiantes en leurs habiletés personnelles à organiser et à exécuter un plan d'action, elles manifestent une fréquence accrue de comportements de promotion de la santé. Ce résultat a des implications importantes pour les professeurs responsables des programmes de formation infirmière universitaire puisque la perception de l'auto-efficacité est une variable attitudinale qui peut être modifiée. Il souligne l'importance pour les professeurs d'utiliser certaines straté-

gies susceptibles de développer et de maintenir la confiance des étudiantes dans l'organisation et l'exécution de leurs travaux académiques et dans l'acquisition des comportements de promotion de la santé. Ce point est d'autant plus important que les résultats de l'étude démontrent que l'attitude et les attentes des professeures influent sur l'adoption de comportements de promotion de la santé chez les étudiantes en sciences infirmières.

Le lien significatif obtenu entre la perception de l'état de santé et les comportements de promotion de la santé est également rapporté par plusieurs études (Frank-Stromborg et al., 1990 ; Pender et al., 1990 ; Weitzel, 1989). Ce lien peut être expliqué par la possibilité que plus les étudiantes croient être en bonne santé, plus elles tentent de maintenir cette santé en adoptant des comportements de promotion de la santé. Il peut également être expliqué par la possibilité que plus les étudiantes s'engagent dans un mode de vie sain, plus elles se sentent en santé.

Aucun lien significatif n'a été obtenu entre la variable interactive «contrôle perçu de la santé \times importance de la santé» et l'ensemble des comportements de promotion de la santé. Ce résultat ne soutient pas la proposition théorique qui postule que plus une personne croit que la santé est sous son contrôle personnel (orientation interne du foyer de contrôle) et que sa santé a une valeur importante, plus cette personne s'engagera dans des comportements de promotion de la santé. Cependant, il est possible que le contrôle personnel face à la santé et l'importance qu'on y accorde, variables identifiées comme malléables, soient tributaires de l'apprentissage des étudiantes en matière de santé sur une période continue. En d'autres mots, il est possible que le contrôle de la santé et la valeur accordée à celle-ci changent au cours de la formation universitaire de ces étudiantes par un contenu de cours axé sur la santé, par l'adoption plus importante de comportements de promotion de la santé et par le rôle continu qu'occuperont les professeures comme modèles de santé.

Variables modifiantes

Le «contexte académique : influence des professeurs» est confirmé comme variable prédictive des comportements de promotion de la santé. Cependant, sa contribution est plutôt modeste. Il est possible que ce résultat soit le reflet d'une collecte de données tenue trop tôt pour ces étudiantes de première année. Les professeurs sont encore peu connus et peuvent n'exercer qu'une influence très minime à ce moment de la formation. Ce commentaire peut également s'adresser à la dimension exigences académiques.

Il est également possible que les résultats peu significatifs reliés au contexte académique s'expliquent par le manque de sensibilité de l'Échelle du contexte académique à saisir l'information requise. Cette étude pilote a d'ailleurs engagé les chercheurs vers un examen plus approfondi de cette échelle de même que l'Échelle des influences interpersonnelles. Une rencontre effectuée, après l'étude pilote, auprès d'une vingtaine d'étudiantes de troisième année en sciences infirmières a permis de constater la faiblesse de la validité de contenu de ces échelles. Une analyse factorielle subséquente à cette rencontre a permis de dégager plusieurs dimensions nouvelles reflétant mieux l'expérience académique et interpersonnelle d'étudiantes infirmières. L'Échelle des influences interpersonnelles contient maintenant neuf éléments et tient compte des influences de la famille, ainsi que des amis et des amis de coeur dans l'adoption de comportements de promotion de la santé. L'Échelle du contexte académique comporte 20 éléments dans sa nouvelle version et considère, entre autres, le nombre de crédits, le nombre d'heures d'études et de travail rémunéré, l'utilisation des services parascolaires, la complexité du contenu des cours, l'importance que les professeurs accordent aux comportements de promotion de la santé des étudiantes et leur encouragement à cet égard, et les connaissances acquises sur la santé.

Il est possible que le lien significatif obtenu entre le lieu de naissance et les comportements de promotion de la santé soit expliqué par le fait que la santé et les comportements de santé soient perçus différemment par la population étudiante née au Québec et celle née hors Québec. Les activités entreprises par cette dernière population pour promouvoir la santé peuvent ainsi différer pour des raisons culturelles et socio-économiques.

Conclusion

La santé de la personne, famille, groupe ou communauté est un des concepts du métaparadigme infirmier. La santé est à la base de la profession infirmière et la rend exclusive au sens du Code des Professions. La santé pour tous est la priorité d'action des soins de santé primaires et forme, par conséquent, le coeur de la formation professionnelle en sciences infirmières. Les études universitaires en sciences infirmières sont un moment stratégique pour l'apprentissage des étudiantes en regard de leur santé. Le contexte académique devrait hypothétiquement supporter cet apprentissage. La vérification de cette hypothèse constitue l'originalité de l'étude longitudinale présentement en cours.

Notes

1. Aux fins du présent texte, le féminin comprend le masculin.
2. Dans le cadre de cette étude pilote, la version française de l'instrument *Multidimensional Health Locus of Control (MHLC)* (Wallston, Wallston & DeVellis, 1978), composé de trois orientations de foyer de contrôle – interne, externe-chance et externe-pouvoir des autres – a également été utilisée, par mesure de comparaison avec le HLC. Le MHLC est plus récent et plus utilisé que le HLC. Cependant, il a été jugé préférable de ne présenter dans ce document que les résultats obtenus avec le HLC, à cause de leur similarité avec ceux obtenus avec le MHLC. Ce choix est également fondé sur des analyses des deux instruments qui proposent le retour vers le HLC pour ses valeurs psychométriques supérieures et son utilisation plus simple (Cooper & Fraboni, 1988).

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Evaluation of a Home-Based Traction Program for Children with Congenital Dislocated Hips and Legg Perthes Disease

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La traction à domicile est une solution de remplacement à la traction en hôpital pour les enfants atteints de luxation congénitale de la hanche et de la maladie de Perthes. Dans la présente étude qui porte sur vingt-quatre enfants et leurs parents, on a évalué comment le programme de traction à domicile est accepté et s'il est sûr, de même que la façon dont on s'y adapte psychologiquement et ce qu'il en coûte. Tous les parents ont trouvé le programme acceptable. Il n'y a pas eu de complications graves quant au traitement, bien que 12,5 % des enfants ont eu des irritations cutanées et étaient mal à l'aise. Il n'y a pas eu de difficulté importante pour ce qui concerne l'adaptation psychologique; les mères ont fait état de perturbations dans la famille ($p = .007$), les pères ont rapporté des tensions dans leur relation de couple ($p = .012$), et, globalement, les mères ont ressenti une détresse beaucoup plus grande que les pères ($p = .051$). Tous coûts confondus (directs et indirects), on a découvert que le programme de traction à domicile coûte beaucoup moins cher que les soins classiques.

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Home-based traction (HBT) is an alternative to hospital traction for children with congenital dislocated hips and Legg Perthes disease. In this study, we evaluated the acceptability, safety, psychological adjustment, and costs of an HBT program for 24 children and their parents. All parents found the program acceptable. There were no major treatment complications of traction, although 12.5% of children experienced skin irritation and discomfort. There were no major problems in psychological adjustment; mothers reported disruption in family functioning ($p = .007$), fathers reported stress in marital relationships ($p = .012$), and there was significantly greater overall distress for mothers than fathers ($p = .051$). The HBT program was found to be substantially less costly than conventional care when direct and indirect costs were considered.

Children diagnosed with congenital dislocated hips (CDH) and Legg Perthes disease (LPD) are traditionally hospitalized and placed in traction for approximately three weeks. The purpose of traction is to provide immobility for the affected joint or to prevent complications such as avascular necrosis of the hip or neurovascular problems to the legs (Dunst, 1990; Weiner & Hoyt, 1977). However, hospital treatment is costly and not always readily available, and it has been associated with adverse effects on family development, functioning, and financial stability (Hendrick & Inui, 1986; Koren, 1991; Marks, 1991). In the current economic climate in Canada, it is important that we establish a treatment approach that is acceptable, safe, and cost-effective for both health professionals and consumers.

Home-based traction (HBT) is an alternative to conventional hospital traction. The concept of HBT for children with orthopaedic conditions such as CDH and LPD has been generally supported by health-care professionals. However, widespread implementation of HBT programs has not occurred and research designed to evaluate the safety, effectiveness, and cost of such programs is limited in scope and rigour (Capasso & Maffulli, 1990; Chartrand, 1992; Joseph, MacEwan, & Boos, 1982; Mubarak, Beck, & Sutherland, 1986; Villalon & Smith, 1982; Vousinas, MacEwan, & Boos, 1984). The purpose of this study was to evaluate an HBT program for children with orthopaedic conditions, including its impact on their parents.

Literature Review

CDH and LPD are orthopaedic conditions diagnosed in children. The incidence of CDH in Canada is approximately 58:10,000 births (Statistics Canada, 1991) and the incidence of LPD is approximately 1:20,000 in the general population but 1:35 in family members (Hospital for Sick Children, 1992). Traction is a common treatment for both conditions, traditionally in hospital. However, the efficacy of traction for

CDH has not been conclusively established (Fish, Herzenberg, & Hensinger, 1991) and the appropriateness and high cost of carrying out this treatment in hospital have been questioned.

Several reports of HBT programs have been published over the past two decades, primarily retrospective descriptions of the frequency and nature of treatment complications and direct costs of HBT. Joseph, MacEwan, and Boos (1982) described their six-year experience with 66 children (37 in HBT and 29 in hospital traction). No differences were found between the two groups in follow-up radiology reports or in the incidence of avascular necrosis, infections, skin problems, or psychiatric disorders. Similarly, Holmes, Sedgwick, and Scobie (1983) reported on a 15-year review of 140 children in traction (40 in an HBT program). No significant complications were reported in either group. A cost benefit was realized for home management as reported from third-party payees and families.

Vousinas, MacEwan, and Boos (1984) compared the effectiveness of traction and the incidence of severe complications for 60 children with CDH treated with HBT and 30 children hospitalized for pre-reduction traction. Treatment was reported to be equally effective in the two groups, but the incidence and severity of avascular necrosis was inexplicably higher in the hospital group. Mubarak, Beck, and Sutherland (1986) described the HBT experience, over two years, of 14 children with CDH. Indirect cost savings of US\$5,000 per child and the absence of avascular necrosis of the hip and neurovascular problems in the legs were reported. Decreased psychological stress to the child and family was noted; however, the method of assessing this stress was not specified.

Chartrand (1992) reported on four years' experience with HBT for 54 children with CDH and two children with fractured femur, at the Hospital for Sick Children in Toronto. Skin breakdown, replacement of tapes, and chest infections were described in five of the 54 children. A significant cost saving of CAN\$21,000 per child was reported. Not included, however, were costs of professional services and direct and indirect costs incurred by parents.

In summary, published reports support the safety of HBT as well as actual or potential cost savings; however, acceptability to parents, psychological and social adjustment of the child and parents, and indirect costs have not been adequately assessed. A conceptual framework for evaluating the HBT experience has not been developed. Such a framework could be used to describe the relationships amongst the impact of

the child's illness on the child and parents, the incidence of complications, direct cost implications, the shift in patient care responsibility from health professionals to parents, and the collaboration between health-care professionals and consumers.

Conceptual Framework

A hospital/community system-linked model was developed to describe, implement, and evaluate HBT as an innovation or alternative to conventional care (Stockwell et al., 1994). This model had been proposed because a search of the literature failed to provide a theory incorporating the elements of hospital/community-linked care wherein systems of education and support are available to caregivers. Major concepts from models of innovation (Zaltman, Duncan, & Holbeck, 1973); health utilization (Browne, Arpin, Corey, Fitch, & Gafni, 1990); determinants of health (Evans & Stoddart, 1990); self-efficacy (Bandura, 1977); stress, coping, and appraisal (Lazarus & Folkman, 1984); problem-solving (D'Zurilla, 1986); and systems theory (Pallister & Browne, 1986) were combined in creating this model. The central processes are collaboration, reframing, and overcoming obstacles when a critical event, such as the illness of a child, occurs. The outcome of these processes is an innovative alternative to conventional treatment (i.e., HBT).

In the hospital/community system-linked model, HBT is seen as an opportunity as opposed to a stressor. This reconceptualization or reframing can take the form of a question: How can the therapeutic goals be met in an alternative way in order to minimize the negative impact on the child, the parents, and the health-care system? Legitimizing the HBT alternative allows parents to make a more optimistic appraisal of their total situation. We hypothesized that the reconceptualization of the stressor, plus the support of coordinated educational and in-home services, would assist parents, home-care nurses, and hospital nurses in implementing the HBT program in a way that is safe for the child and acceptable to all stakeholders. We further hypothesized that this innovation would result in the psychological well-being of the child and parents and in decreased costs to the health-care system. This model provides a basis for evaluating the HBT alternative in terms of acceptability, safety, psychological impact on the child and parents, and cost effectiveness. A more detailed description of the model can be found in Stockwell et al. (1994).

Methods

Design and Research Questions

A prospective quasi experimental repeated-measures design was used to answer the research questions:

1. Is the HBT program acceptable to parents? Why/Why not?
2. Is the HBT program safe? What are the nature and frequency of untoward effects (complications) for the child and the parents?
3. What are the psychological and social consequences of the HBT program for the child and the parents?
4. What are the direct and indirect costs of HBT?

Sample and Settings

Children from the outpatient paediatric units at two university-affiliated metropolitan hospitals were eligible to participate in the study if they (a) had recently been diagnosed with CDH or LPD, (b) had no additional complicating health problems, (c) were under 16 years of age, (d) had primary caretakers willing to take responsibility for daily care, (e) lived with their primary caretakers at home, and (f) had primary caretakers who spoke and understood English.

During a two-year period, all parents of eligible children who were approached consented to participate in the study and were admitted to the HBT program. Two children diagnosed with CDH did not meet the eligibility criteria (i.e., parents or other family members were unable to take on the primary caretaker role at home). Fifteen of the participating children were diagnosed with CDH and nine with LPD. The mean age of children with CDH was 7.5 months (range 1.5-26 months, $SD=4.8$), with LPD 6.5 years (range 5-8 years, $SD=1.3$). Four of the CDH children were male and 11 were female; eight of the LPD children were male and one was female. Although the sample was small, it was representative of the usual gender distributions for these two orthopaedic conditions.

The mean age of mothers was 31.2 years (range 19-42, $SD=4.1$) and of fathers 32.2 (range 23-44, $SD=6.3$). Family income ranged from \$9,000 to >\$60,000 with the median being \$44,500. Twenty-three of the children came from two-parent families and one child lived with his mother only. There were other children in the home in 18 of the families. In 12 families a parent was at home full-time, and in eight families a parent was at home part-time (i.e., worked part-time outside the home).

The HBT Program

Children in the HBT program are first admitted to the hospital paediatric unit for approximately two days. While hospitalized, children with CDH are placed in a portable traction unit designed to fit cribs at home. Children with LPD are placed in a skin-traction apparatus adjusted to fit the child's bed at home. The child is initially placed in traction by the orthopaedic surgeon or resident. The traction is adjusted for each child and for the crib or bed at home. Parents are then taught by the project coordinator how to place in and remove their child from the traction apparatus, how to manage the traction apparatus, and how to observe their child for any problems, using information packages developed by the project nurse (Stockwell et al., 1994). The child is discharged from hospital when he/she has adjusted to the traction, the parents are knowledgeable about traction care, and collaboration has been established between hospital and community services.

Collaboration between parents and health professionals from the hospital and the community is viewed as a key component in implementation of the HBT program. The program is administered by a project coordinator, who is an experienced paediatric nurse employed by the hospital. The primary responsibilities of the project coordinator are to enrol eligible children and parents in the HBT program, coordinate hospital care for the child, provide teaching for the parents, and coordinate hospital and home-care nursing services prior to discharge. The project coordinator and a home-care nurse visit the child and parents on the day of discharge or the day after. The home-care nurse is employed by a community nursing agency such as the regional public health department, the Victorian Order of Nurses, or St. Elizabeth's Nurses. The community agency attempts to have the same nurse consistently visit each family. The home-care nurse is not consistent across families, as participants are spread throughout a wide geographic area serviced by several nursing agencies. The home-care nurse continues to visit the child and parents as required (an average of once to twice per week). Parents are encouraged to contact the home-care nurse, orthopaedic surgeon, family physician, or project coordinator, or to return the child to the hospital ward or emergency room if they have any concerns or if any untoward events occur. Follow-up of the child's orthopaedic condition and traction treatment is carried out by the orthopaedic surgeon at the orthopaedic outpatient clinic following completion of HBT or during rehospitalization if surgical treatment of the CDH or LPD is deemed necessary. A more detailed description of the HBT program is summarized in Stockwell et al. (1994).

Data Collection Procedure

Ethics approval was received for the HBT study from the two participating hospitals. Eligible children were identified by the orthopaedic surgeons and consent was obtained from the parent(s) by the project coordinator. Data were collected, by the project coordinator, from parents during the hospital stay (Time 1), at the end of the home stay (Time 2), and two to three weeks following completion of the HBT program (Time 3). The outcomes, the source of data, the data collection method, and the measures used are summarized in Table 1.

Table 1 Data Collection Procedures for Study Outcomes				
Outcomes	Time	Measure	Method	Source
Acceptability	T3	2 Open-Ended Questions	Interview	Mother Father
Untoward Effects	T1, T2		Diary Chart Clinical Assessment X-Rays	Parents Nurse Orthopaedic Surgeon
Psychologic Adjustment to Illness	T1, T3	PAIS (Derogatis & Lopez, 1993) CBCL (Achenbach & Eldebrook, 1983)	Questionnaire	Mother Father
Costs Direct/ Indirect	T1, T2	Health Services Utilization Questionnaire (Browne et al., 1990)	Questionnaire	Parents' Diary

Measures

Acceptability of the HBT program. Acceptability was assessed by asking the parents two open-ended questions during a structured interview at Time 3. These were: Was the HBT program acceptable to you? Why or why not?

Safety of the HBT program. Safety was assessed by describing the nature and frequency of major and minor complications of HBT for the child and parents. Data on safety were collected throughout the hospital and home stay from the child's medical record and a diary that the parents were asked to keep. The orthopaedic surgeons assessed the children for major complications, including avascular necrosis of the hip and neurovascular problems to the legs, at Time 1 and Time 2, by clinical assessment and x-ray.

Psychological adjustment to the HBT program. The Psychological Adjustment to Illness Scale (PAIS) (Derogatis & Lopez, 1983) was administered to each parent by the project coordinator to assess psychological adjustment to their child's illness and HBT treatment at times 1 and 3. The PAIS was designed to measure the individual's ability to cope with a medical event (i.e., the child's illness and treatment) in relation to health utilization, vocational and domestic environment, relationships with spouse and extended family, and social and psychiatric distress.

The PAIS is a structured 46-item interview, with each item rated on a four-point scale. The internal consistency ($r=.81$), inter-rater reliability ($r=.86$), and construct validity (judged by factor analysis and reported to be moderate to good) were established by Derogatis and Lopez (1983). Convergent validity, established by correlating the PAIS Total Adjustment Score with the Global Adjustment to Illness Scale, was $r=.81$ (Derogatis & Lopez). Interrelationship among domains averaged $r=.31$, reflecting the breadth and sensitivity of the measure (Derogatis & Lopez).

The Child Behavior Checklist (CBCL) (Achenbach & Edelbrock, 1983) was administered to each parent by the project coordinator, to assess their perception of the psychological consequences of HBT on the child, at times 1 and 3. Different versions of the measure were used for parents of two- to three-year-olds and for four- to 16-year-olds. The CBCL was not deemed appropriate for children under two years of age. For the children with LPD who ranged in age from five to eight, the Behavior Profile, with 20 social competence items, was also completed by parents. These items, scored on a three-point scale, included parental report of the extent and quality of the child's participation in sports, hobbies, games, activities, organizations, jobs, chores and friendships; how the child got along with others, played and worked alone, and functioned in school. The total social competence score and the behavioural-problem scores provided global indices of the child's competencies and problems. This instrument is reported to have good evidence of content and construct ($r=.62-.87$) validity and test-retest reliability ($r=.72-.97$) (Achenbach & Edelbrock, 1983).

Direct and indirect costs of HBT. The Health Services Utilization Questionnaire (HSUQ) (Browne et al., 1990) was developed from the measure by Spitzer, Roberts, and Delmore (1976) and utilized to assess the direct cost of health-care service plus the parents' direct costs (travel, telephone, babysitting, and child entertainment) and indirect

costs (time off work, sick time). Parents were asked to record, in a diary, all costs incurred throughout the HBT program. Each set of parents self-administered the HSUQ, which included questions about the respondent's use of 12 categories of health services at Time 1 and Time 2. Interrater reliability (72-99%) and content validity for this questionnaire have been reported as good (Browne et al).

A chart abstraction sheet (CAS) was developed to record data on sociodemographic and disease variables obtained during a structure interview with the parent(s) at Time 1. All measures were pilot-tested with the first three sets of parents. As only minor changes in wording were made to a few questions, these parents were included in the study sample.

Data Reduction and Management

All data were recorded directly on the data collection measures and stored in a locked drawer in the project coordinator's office. Confidentiality was maintained through the use of numerical codes. A master list of codes and names of participants was stored in the office of the principal investigator and destroyed at the end of the study. The quantitative data from the PAIS, CBCL, HSUQ, and CAS were coded and entered on the SPSS:PC software program by a trained data-entry clerk and reduced to summary and subscale scores on the computer.

Qualitative data from the questions on acceptability and safety were subjected to interpretive content analyses. Responses to the open-ended questions were transcribed by an experienced transcriber and categorized. These categories were determined by two of the co-investigators, based on the conceptual framework and literature review. When disagreements arose, the category was discussed until consensus was reached. Percentages on the frequency of occurrence of responses were calculated for each category.

Data Analyses

Data were analyzed using (a) descriptive statistics (means, median, and standard deviations) to describe the study sample and the frequency of untoward effects, and (b) parametric statistics (paired and unpaired t-tests) to detect significant differences in psychosocial impact and costs. Data on acceptability and safety were categorized (i.e., Yes/No) and subjected to interpretive content analyses.

Results

Acceptability of the HBT Program

At Time 3, all of the parents of eligible children stated that the HBT program was acceptable. When asked "Why?" parents stated that the choice of returning to hospital, if necessary, was the most important factor in their initial acceptance of the program (75%). Other major reasons for choosing the HBT program were the instruction provided during the initial hospitalization (60%), and the ongoing availability of support from the visiting home nurse and the family physician (56%). Parents also reported that they chose HBT to enhance family unity (46%), the child's well-being (43%), and financial stability (35%).

Safety of HBT

There were no major medical or treatment complications, as determined by clinical assessment by the orthopaedic surgeon and x-ray of the 24 children in the HBT program. When queried, the orthopaedic surgeons said they considered that the treatment objectives were met equally well in the group of children receiving HBT and in those traditionally hospitalized in traction. The minor complications of skin irritation and slight irritability/pain were each reported in three children. Although no data were available for direct comparison, health professionals considered these minor complications comparable to those experienced by children receiving conventional hospital treatment.

Organizational problems within the hospital, home-care, and follow-up systems were also reported by parents as "complications." These problems included changes in post-traction surgical bookings ($n=4$), unclear follow-up plans and appointments ($n=8$), and delays in the initial referral to the HBT program ($n=3$). These problems decreased in frequency as the program became established.

Psychological Adjustment to the Child's Illness and HBT

Parents. The PAIS was completed by 23/24 mothers and 11/23 fathers. One mother decided not to complete the PAIS due to time constraints. Ten fathers declined to complete the PAIS after reviewing the measure, stating that they were not involved or were only minimally involved in their child's care at home. Data were analyzed to detect between-subject differences (i.e., between mothers and fathers of each illness group [CDH and LPD], separately and combined) and within-subject differences (i.e., among the mothers, fathers, and mother/father pairs).

A summary of (a) PAIS scores for mothers at times 1 and 3, (b) PAIS scores for mother/father pairs at times 1 and 3, and (c) significant results are presented in tables 2, 3, and 4, respectively.

Table 2 PAIS Scores for Mothers				
PAIS subscale Score	Mothers (CDH, <i>n</i> =14)		Mothers (LPD, <i>n</i> =9)	
	Time 1	Time 3	Time 1	Time 3
Health Utilization (SD)	3.65 (2.59)	3.85 (3.06)	5.86 (3.34)	7.14 (2.91)
Vocational (SD)	3.25 (3.08)	4.42 (4.08)	5.00 (2.37)	6.16 (2.40)
Family (SD)	3.00 (1.57)	4.14 (3.70)	7.43 (3.05)	11.29 (6.04)
Sexual (SD)	3.53 (2.99)	3.53 (3.57)	5.50 (3.78)	6.33 (3.72)
Extended Family (SD)	2.57 (2.20)	2.50 (3.00)	3.71 (2.87)	3.71 (2.56)
Social (SD)	7.64 (5.15)	6.92 (4.93)	8.29 (3.54)	9.14 (4.77)
Psychiatric Distress (SD)	6.92 (3.03)	6.00 (2.83)	8.57 (3.26)	10.00 (3.51)
Total (SD)	29.85 (9.26)	30.50 (18.62)	41.14 (15.99)	51.00 (21.23)

Table 3 PAIS Scores for Mother/Father Pairs				
PAIS subscale Score	Mothers (<i>n</i> =10)		Fathers (<i>n</i> =10)	
	Time 1	Time 3	Time 1	Time 3
Health Utilization (SD)	5.00 (2.76)	5.70 (3.06)	4.64 (2.87)	5.10 (3.57)
Vocational (SD)	4.67 (2.69)	5.66 (3.63)	3.33 (2.29)	3.88 (2.42)
Family (SD)	6.18 (3.37)	8.40 (6.02)	5.45 (3.14)	5.30 (2.83)
Sexual (SD)	4.30 (2.66)	6.22 (3.96)	3.40 (3.80)	2.55 (2.74)
Extended Family (SD)	2.91 (2.77)	4.30 (3.26)	2.18 (2.04)	3.00 (1.49)
Social (SD)	8.09 (4.20)	9.50 (3.34)	7.45 (3.80)	7.60 (4.94)
Psychiatric Distress (SD)	8.55 (2.11)	9.10 (2.84)	7.54 (2.02)	5.3 (1.89)
Total (SD)	37.36 (9.76)	47.00 (19.07)	34.64 (10.79)	32.60 (11.37)

Table 4***Psychosocial Effects of HBT on Parents as Assessed Using the PAIS***

Time	Rater	Results
BETWEEN-SUBJECT DIFFERENCES		
T1	Mothers & Fathers (CDH & LPD)	No significant differences between groups
T3	Mothers (CDH & LPD)	Distress in family functioning
T3	Fathers (CDH & LPD)	No significant differences between groups
WITHIN-SUBJECT DIFFERENCES		
T1 & T3	Mothers (LPD)	Distress in health utilization Distress in family functioning
MOTHER/FATHER PAIRS		
T1		No significant differences between mothers and fathers
T3	Mother	Psychiatric distress
T3	Father	Distress in sexual relationships
T3	Mother	Significant difference in total psychological adjustment of mothers versus fathers

There were no significant between-subject differences in psychological adjustment in mothers and fathers of children with either orthopaedic condition at Time 1. At Time 3, mothers of both CDH and LPD children reported significantly greater distress than fathers in family functioning ($t = -2.75$, $df\ 20$, $p = .012$). Mothers of children with LPD (who were older) described their children as difficult to entertain and resentful of being suddenly immobilized and separated from their peers, and reported significant distress in both health utilization ($t = 3.06$, $df\ 6$, $p = .022$) and family functioning ($t = -2.59$, $df\ 6$, $p = .041$).

Examination of mother/father pairs (combined CDH and LPD) at Time 1 showed no significant differences. At Time 3, mothers showed increased distress in the psychiatric subscale (increased anxiety and tension) ($t = 3.51$, $df\ 9$, $p = .007$) and fathers showed increased distress in the sexual relationship subscale ($t = 3.21$, $df\ 8$, $p = .012$). There was also a significant difference between mothers and fathers in the Global PAIS score at Time 3, with mothers having higher overall scores than fathers ($t = 2.26$, $df\ 9$, $p = .051$).

Children. No statistically significant psychological consequences were seen from Time 1 to Time 3 with the children, as assessed by the

Achenbach CBCL (Achenbach & Edelbrock, 1983). All scores were within the normal range. For the nine children with LPD, six parents completed the Behavioural Profile, but since this number was small no analyses were completed on these data.

Unchanged CBCL scores from Time 1 to Time 3 is understandable considering the small time span of the program. Informal comments from parents suggested that older children exhibited reactions to hospitalization such as crying and clinging behaviours. These behaviours disappeared when the child returned home but were replaced by an increase in worried behaviour and decreased cooperativeness.

Direct and Indirect Costs of HBT

The economic analysis of the HBT program was based on both direct and indirect costs for hospital and home care. The major components of this analysis were direct costs in hospital, indirect costs to the family (in hospital and at home), and direct costs for community care. Direct costs of HBT in hospital included hospital costs (1990) multiplied by the number of days in hospital. Hospital costs were calculated as (a) the ward per diem rate of CAN\$326.86 (including volunteer costs [\$4.83] and food [\$29.59]), and (b) one-time fees (including admitting [\$81.75] and medical records [\$389.39]). Direct hospital costs were added to the indirect costs incurred by the family (in hospital and at home), the HBT program costs, and the community-care costs for the days at home. Data on the specific components comprising the costs of the HBT program are summarized in Table 5.

Table 5

*Direct and Indirect Costs Involved in Cost Analysis for 1990**

Direct Costs in Hospital	Indirect Costs to Family	Direct Costs for Community Care
Rate	* Family expenses	* No. of nursing visits
* Ward per diem	* Child care	* No. of physio visits
— × no. of days	* Sick time	* No. of homemaker hrs
— × no. of volunteers	* No. of hours work lost	* Family doctor visits
* Food	* Travel	* Clinic visits
One-time fees	* Parking	* Supplies
* Admitting	* Telephone	* Equipment
* Medical Records	* Miscellaneous (food, entertainment)	* Project coordinator
* All costs are in Canadian dollars		

Costs for conventional hospital treatment were also estimated. Direct hospital costs were based on direct hospital costs (1990) multiplied by the average length of stay for conventional hospital treatment. The average length of stay was determined from a three-year retrospective study of children with CDH or LPT admitted to the two hospitals. The results of the retrospective analyses indicate that an average 21-day hospital stay was needed for conventional management of CDH or LPD. Therefore, the direct hospital costs were calculated by multiplying the daily hospital costs by 21 days and adding the one-time fee. Indirect costs could not be added to direct costs for conventional hospital treatment, as it was impossible to collect this data retrospectively and there was no comparison group for this study. However, it was hypothesized that, if the indirect costs were not included in the costs of conventional care, the cost savings could be considered an underestimate of actual costs and, therefore, conservative. A comparison of the estimated costs of an average 21-day conventional hospital course of treatment (direct hospital costs only) versus the actual direct and indirect costs of maintaining the 24 patients in the HBT program is summarized in Table 6. Even using this conservative approach for the economic analysis, HBT was found to be much less costly than conventional hospital treatment for these children and their parents.

Table 6

Comparison of Direct Cost for 21-Day Conventional Hospital Treatment (CHT) versus Actual Direct and Indirect Cost of Home-Based Traction (HBT)

Group	CHT Direct Cost	HBT Direct & Indirect Costs	Difference CHT & HBT
LPD (n=9)	\$ 72,522.18	\$ 29,343.82	\$ 43,178.36
CDH (n=15)	120,870.30	39,544.46	81,325.84
Total (n=24)	\$ 193,392.48	\$ 68,888.28	\$ 124,504.20

Discussion

The HBT program was developed as an alternative to institutional care for the child requiring traction. The hospital/community system-linked model of innovation (Stockwell et al., 1994) was used as the conceptual basis for the evaluation of an innovation, the HBT program. Collaboration (between health-care providers and consumers), reframing, and overcoming obstacles associated with the illness of a child (the condition and HBT treatment) were hypothesized to influence the acceptability, safety, psychological impact, and cost-effectiveness of this model.

Parents unanimously accepted the HBT program. All families chose it over conventional hospital treatment and the 24 children remained at home throughout their course of treatment. Parents reported that they chose home-based care for a variety of reasons. Initially, mothers said the most important factor was the option of returning the child to hospital in the event of problems. However, as time went on mothers stated that their real reasons for wanting to have the child at home had to do with family unity, the child's well-being, and financial stability.

Mothers were the primary caregivers in the home. They stated that they preferred caring for their child at home and were willing to rearrange their commitments to accommodate the needs of the child. However, they were distressed by the constant burden of responsibility and lack of sufficient support from fathers and health professionals. This distress is a symptom of the human cost of the shift in responsibility for medical care from the health professional to the consumer. Although mothers may be willing to take on this responsibility, it is at the expense of their employment, leisure time, and vacations. This human cost has been described by mothers who take on the care of children with chronic illnesses (Leonard, Brust, & Nelson, 1993; Wills, 1983). Parents of chronically ill children have been reported to experience psychological distress (Breslau, Staruch, & Mortimer, 1982); however, quantitative research on this group has been minimal.

In order to minimize this cost, parents and health-care professionals must develop a partnership. Sanctioned parental responsibility by health-care professionals is not enough. Collaboration with health professionals in caring for their child can provide parents with the opportunity to gain confidence. They can learn how to anticipate and recognize problems with their child and his/her treatment, and can become more knowledgeable about existing resources and how to access them.

A decrease in resources often precipitates the reframing of conventional practice and the legitimizing of professional and institutional services to the consumer. Consumers can feel empowered by an optimistic and manageable appraisal of their situation, and by a coordinated response to their circumstances, including the treatment of a child's illness. Families, and particularly mothers, will require support from extended family, homemakers, and other professionals in accommodating this shift in care. Mothers working outside the home may also need assistance in requesting a leave of absence or a financial subsidy.

Couples may require marital support to alleviate the distress in family functioning (reported by mothers) and disruptions in marital relationships (reported by fathers). In this study, both mothers and

fathers confirmed that although the HBT program produced some temporary distress they were able to cope better with the home-traction experience than with a three-week hospital stay.

In addition to reducing the psychological impact of a child's illness on the family, an HBT program has the potential to significantly reduce the direct costs of hospitalization, free up hospital beds, and increase the efficiency of care delivery. The efficiency of the HBT program is an important consideration in the present fiscal environment. However, an efficient program must also satisfy consumers while meeting the goals of medical treatment without additional risk to the child. The HBT program was shown to be as safe as conventional hospital treatment and substantially less costly when both direct and indirect costs were considered.

The HBT program was initiated approximately six years ago. It continues to exist on the paediatric units where it was developed, with children being hospitalized an average of one to two days prior to being discharged home. It is considered a success for both families and the institution, as it is comparable to or better than conventional treatment in many respects and is less costly. In the current economic environment of diminished resources, a "win-win" program is the only way to improve service to consumers.

Evaluation of the HBT program was limited by the small sample size and lack of a control group. It was impossible to assess the psychological adjustment of children under the age of two years because of the lack of an appropriate measure. The short follow-up time also prevented identification of long-term psychological and social consequences of the critical event.

Evaluation of the HBT program provides information for decision-making regarding children with CDH and LPD. Future research endeavours addressing the impact on parents of taking on caregiving responsibilities and the impact on children of having a parent care for them at home should be encouraged. More sophisticated research designs incorporating larger samples from a variety of sites must be undertaken. The development and evaluation of the HBT program may serve as a model for treating other paediatric illnesses in the community. This concept should be of interest to policy-makers as well as practitioners.

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Changes in the School-to-Work Transition for Canadian Nursing Program Graduates

Robert D. Hiscott

Le présent article examine les changements dans la transition école-travail qu'ont connus les diplômés des programmes de sciences infirmières au niveau collégial et universitaire au Canada entre 1978 et 1992. On a pour cela utilisé les données provenant de quatre sondages nationaux parmi les diplômés, sondages effectués par Statistiques Canada. En étudiant les quatre cohortes de diplômés des programmes de sciences infirmières (1 976 diplômés en 1978, 1 982 diplômés en 1984, 1 986 diplômés en 1988 et 1 990 diplômés en 1992), on peut établir des tendances prépondérantes pendant cette période. Les tendances à l'emploi observées comprennent une augmentation marquée dans les emplois à mi-temps environ deux ans après l'obtention du diplôme (avec une baisse correspondant dans les emplois à plein temps), et une augmentation reliée aux postes temporaires (avec des emplois permanents en baisse). Ces données semblent indiquer que la transition école-travail pour les diplômés des programmes de sciences infirmières devient de plus en plus difficile. On examine les répercussions qu'auront ces conclusions empiriques sur la transition école-travail pour ce groupe de diplômés du niveau post-secondaire. On se penche également sur les effets de changements importants sur le marché du travail (passage d'un manque grave d'infirmières dans le milieu hospitalier à la fin des années 80 aux licenciements du personnel infirmier, aux suppressions de lits et aux fermetures d'unités de soins et d'hôpitaux au début des années 90).

This paper investigates changes in the school-to-work transition for graduates of Canadian community college and university nursing programs between 1978 and 1992, using data from four different National Graduates Surveys conducted by Statistics Canada. By examining four distinct cohorts of nursing program graduates (1976 graduates in 1978, 1982 graduates in 1984, 1986 graduates in 1988, and 1990 graduates in 1992), we can identify salient trends over time. These observed employment trends include a marked increase in part-time employment approximately two years after graduation (with a corresponding decline in full-time employment), and an associated increase in temporary positions (with declining permanent employment). These data suggest that the school-to-work transition for graduates of nursing programs has become more difficult over time. Implications from these empirical findings on the school-to-work transition for this segment of post-secondary graduates are discussed. The impact of significant labour market changes (transition from an acute shortage of nurses in hospital settings in the late 1980s to nursing layoffs, bed closures, and ward and hospital shutdowns in the early 1990s) is also addressed.

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Introduction and Literature Review

By examining the school-to-work transition experiences of Canadian post-secondary graduates, we can improve our understanding of the early career experiences of a highly trained segment of the labour force and increase our knowledge of how the labour market functions. By investigating different cohorts of post-secondary graduates over a large time frame (1978 to 1992), we can identify important trends in employment experiences. This paper focuses on graduates of Canadian community college and university nursing programs in order to enhance our knowledge of how nursing graduates make the transition to the labour market up to two years after completing their post-secondary programs.¹

One baseline model that can be used to explore the school-to-work transitions of post-secondary graduates is the human capital model (Becker, 1975), which predicts that personal investments in education (through specialized training to obtain credentials) will lead to greater success in the labour market (higher-status occupations). This model is limited, however, since it focuses almost exclusively on the supply side of the labour market (on the educational/skill attributes of individual workers), while largely neglecting employers and work organizations (Krahn & Lowe, 1988, p. 73-77). The nursing market has undergone significant changes in recent years, moving from an acute shortage of nurses in hospital settings in the late 1980s (particularly in large metropolitan areas such as Toronto), to layoffs, bed closures, and ward/hospital shutdowns in the early 1990s. Such dramatic labour market changes are expected to have a direct impact on employment opportunities and outcomes for recent nursing graduates, which cannot be accounted for by the human capital model.

Recent research on the school-to-work transition in the post-industrial societies of Canada, the United States, and Britain has pointed to some disturbing trends, including marked growth in part-time employment and underemployment of graduates. In Canada, there has been dramatic growth in part-time employment in general (Krahn, 1991; McKie, 1992), and the increase has been particularly strong among youth (Betcherman & Morissette, 1994, p. 2-3). According to Ashton and Lowe (1991, p. 2), youth (which would include post-secondary graduates entering the labour force for the first time) are disproportionately affected by problems related to the "increasingly insecure nature of employment throughout the industrialized world." Betcherman and Morissette (p. 12) conclude that "with the onset of the recession...youth labour market outcomes have deteriorated consider-

ably." Research by Krahn and Lowe (1991, p. 168) demonstrates that, although the school-to-work transition has not completely broken down in Canada, "the process has been prolonged and made more difficult." Increasing trends toward part-time employment and underemployment among youth have fostered yet another trend, toward "life-long learning" (Ashton, Green, & Lowe, 1993, p. 136-138), exemplified by people who "stay on longer at school and make a more gradual transition to the labour market."

In considering the school-to-work transition in the broader context of patterns of gender segregation (in both educational attainments and occupational outcomes), we must also recognize that although increasing numbers of women are to be found in traditional male fields, such as engineering and business, women with post-secondary education remain concentrated in education and nursing (Krahn, 1991, p. 30). This paper focuses on the employment outcomes for predominantly female graduates of Canadian nursing programs. Earlier research has shown that there is a strong empirical link between education and occupation for nursing graduates, with the vast majority being employed in nursing jobs two years after graduation (Clark & Zsigmond, 1981). However, Meltz and Stager (1984, p. 33) caution that past linkages between education and occupation may not be reliable indicators for planning and prediction "if new occupations become available and economically desirable for graduates of a given field of study." Recent dramatic changes in the nursing labour market (notably hospital layoffs) imply a reduction of in-field employment opportunities for new graduates. This may result in increasing numbers of nursing graduates seeking better employment opportunities outside their chosen field.

Research Methods and Data Presentation

Over the years, Statistics Canada conducted a series of large-scale National Graduates Surveys of recipients of degrees or diplomas from Canadian post-secondary institutions. These large sample surveys were designed to examine employment outcomes during the first two years after graduation, along with the relationship between educational attainments and subsequent employment experiences. National Graduates Surveys were conducted in 1978, 1984, 1988, and 1992, based, respectively, on 1976, 1982, 1986, and 1990 post-secondary graduates. Some key standardized measures of the school-to-work transition for these labour force entrants are examined with a view to identifying recent trends and patterns.

Each of the National Graduates Surveys conducted by Statistics Canada is based on a systematic probability sample design, disproportionately stratified by key variables of province, level, and field of study (Clark & Zsigmond, 1981; Clark, Laing, & Rechnitzer, 1986; Statistics Canada, 1988, 1989, 1992), permitting unbiased estimation of population parameters.² A weighting factor is applied to all survey data, to account for different sampling fractions for each region and type of education program. All statistics provided in the data tables shown here are population estimates for the numbers and percentages of post-secondary graduates in the larger population. The magnitude of sampling error for each statistic has been checked, and for cases of high sampling variability (between 16.6 and 25.0%) this has been denoted in data tables with an asterisk – such estimates should be interpreted with caution. To avoid implying greater statistical precision in population estimates than is reasonable, all population counts or totals provided in each of the data tables have been rounded to the nearest 50 units (i.e., the last two digits rounded to “00” or “50”), as recommended by Statistics Canada.

The basic sociodemographic profile of graduates of Canadian nursing programs changed modestly between 1976 and 1990. In terms of gender mix, the proportion of male graduates increased across the four surveys (from 2.7 to 9.1% for community college graduates, and from 1.6 to 4.5% for university graduates). Average ages of nursing program graduates also increased modestly across the first three surveys, and then declined with the latest survey. For community college graduates, average ages were 24.3 years in 1976, 26.3 in 1982, 28.5 in 1986, and 26.2 years in 1990, while for university graduates average ages were 27.4, 29.3, 31.8, and 30.3 years, respectively, across the four surveys. Modest increases in age distributions may reflect the increasing proportion of part-time enrolment in post-secondary education programs across the country over time, and may also be a function of an increasing proportion of mature experienced registered nurses who are now pursuing post-secondary credentials in nursing.³

Table 1 profiles trends in full-time and part-time employment of nursing program graduates and all other graduates across the four National Graduates Surveys. The vast majority of nursing graduates – well in excess of 90% across the four surveys – were employed two years after graduation. If we look at employed graduates only, we see that the proportion of community college nursing graduates employed on a part-time basis increased dramatically across the four surveys, from about one in 10 in 1978 to more than one in five by 1992. Part-time employment also increased markedly for university nursing graduates,

Table 1

*Employment Status for Job Two Years Post-Graduation
by Program Type and National Graduates Survey*

<i>National Graduates Survey</i>				
Year of Graduation	1976	1982	1986	1990
Year of Survey	1978	1984	1988	1992
COMMUNITY COLLEGE GRADUATES				
Nursing Program Graduates				
Employed Full-Time	89.9%	87.3%	84.1%	77.9%
Employed Part-Time	10.1	12.7	15.9	22.1
Weighted Total	5,200	4,400	6,150	5,950
All Other Program Graduates				
Employed Full-Time	94.5%	89.2%	87.3%	88.8%
Employed Part-Time	5.5	10.8	12.7	11.2
Weighted Total	17,950	43,300	67,750	44,450
UNIVERSITY GRADUATES				
Nursing Program Graduates				
Employed Full-Time	95.1%	90.9%	82.8%	85.3%
Employed Part-Time	4.9*	9.1*	17.2	14.7*
Weighted Total	1,000	2,050	3,100	1,750
All Other Program Graduates				
Employed Full-Time	88.5%	88.8%	89.4%	88.2%
Employed Part-Time	11.5	11.2	10.6	11.8
Weighted Total	52,200	81,700	102,050	103,150
* High sampling variability associated with this population estimate				
Source: Statistics Canada National Graduates Surveys including				
(1) 1978 Survey of 1976 Graduates, (2) 1984 Survey of 1982 Graduates,				
(3) 1988 Survey of 1986 Graduates, and (4) 1992 Survey of 1990 Graduates				

from approximately one in 20 in 1978 to one in seven in 1992. By comparison, the level of part-time employment has been relatively stable over the 1982-1992 decade for non-nursing community college and university graduates, ranging from 10 to 12%. These data suggest that the growing trend towards part-time employment among college- or university-educated labour force entrants is strongest among graduates of nursing programs. These three surveys asked graduates employed on a part-time basis to indicate why they held part-time jobs. Among nursing graduates, the most commonly cited reason was that full-time

work could not be found. Hence in many cases part-time employment is not a stated preference but an involuntary result of the unavailability of full-time jobs.

Graduates responding to each of the four surveys were also asked to indicate whether they were employed in permanent or temporary positions two years after graduation. Table 2 reveals that while the majority of all post-secondary graduates had found permanent jobs two years after graduation, there was an increasing trend towards tempo-

Table 2

*Permanent or Temporary Job Two Years Post-Graduation
by Program Type and National Graduates Survey*

<i>National Graduates Survey</i>				
Year of Graduation	1976	1982	1986	1990
Year of Survey	1978	1984	1988	1992
COMMUNITY COLLEGE GRADUATES				
Nursing Program Graduates				
Permanent Position	94.3%	93.2%	85.9%	83.5%
Temporary Position	5.7	6.8	14.1	16.5
Weighted Total	5,150	4,300	6,150	5,950
All Other Program Graduates				
Permanent Position	89.6%	81.4%	70.8%	79.9%
Temporary Position	10.4	18.6	29.2	20.1
Weighted Total	17,950	41,150	65,650	42,550
UNIVERSITY GRADUATES				
Nursing Program Graduates				
Permanent Position	93.7%	88.1%	88.1%	83.2%
Temporary Position	6.3*	11.9*	11.9	16.8*
Weighted Total	1,000	2,000	3,050	1,700
All Other Program Graduates				
Permanent Position	78.1%	73.0%	76.0%	74.1%
Temporary Position	21.9	27.0	24.0	25.9
Weighted Total	54,900	76,100	96,550	96,950

* High sampling variability associated with this population estimate

Source: Statistics Canada National Graduates Surveys including
(1) 1978 Survey of 1976 Graduates, (2) 1984 Survey of 1982 Graduates,
(3) 1988 Survey of 1986 Graduates, and (4) 1992 Survey of 1990 Graduates

rary employment over the time frame examined. Among community college nursing graduates, approximately one in 20 was employed in temporary positions in 1978, the figure increasing to about one in six by 1992. A very similar trend is found for university nursing graduates over time. By comparison, the level of temporary employment among non-nursing graduates is markedly higher than that found for nursing graduates in each of the survey years. Also, there is a less consistent, non-linear, trend in the level of temporary employment among graduates of non-nursing programs across the four surveys.

Table 3

Relationship between Education and Job Two Years Post-Graduation by Program Type and National Graduates Survey

<i>National Graduates Survey</i>				
Year of Graduation	1976	1982	1986	1990
Year of Survey	1978	1984	1988	1992
COMMUNITY COLLEGE GRADUATES				
Nursing Program Graduates				
Closely Related	86.6%	90.9%	88.5%	92.9%
Partially / Not Related	13.3	9.1	11.5	7.1
Weighted Total	5,200	4,200	6,100	5,900
All Other Program Graduates				
Closely Related	60.5%	56.5%	46.0%	55.6%
Partially / Not Related	39.5	43.5	54.0	44.4
Weighted Total	17,950	40,300	67,550	44,150
UNIVERSITY GRADUATES				
Nursing Program Graduates				
Closely Related	75.4%	75.7%	64.7%	82.9%
Partially / Not Related	24.6	24.3	35.3	17.1*
Weighted Total	1,000	2,000	3,100	1,750
All Other Program Graduates				
Closely Related	41.1%	46.0%	46.0%	56.2%
Partially / Not Related	58.9	54.0	54.0	43.8
Weighted Total	54,750	73,900	101,550	102,550
* High sampling variability associated with this population estimate				
Source: Statistics Canada National Graduates Surveys including				
(1) 1978 Survey of 1976 Graduates, (2) 1984 Survey of 1982 Graduates,				
(3) 1988 Survey of 1986 Graduates, and (4) 1992 Survey of 1990 Graduates				

Post-secondary graduates were queried about their completed educational programs and their subsequent employment two years after graduation, to determine whether they were closely, partially, or not related. The expressed relationship between education and employment two years after graduation is a derived measure, based upon responses to two survey questions.⁴ High proportions of nursing graduates indicated that their education and subsequent employment were closely related, relative to graduates of non-nursing programs. This is especially true for graduates of community college nursing programs, with approximately nine in 10 graduates signifying a close relationship between education and employment. Beyond this, no consistent (i.e., linear) trends evident over time were reflected across the four surveys. A higher proportion of graduates (both nursing and all others across the two institution types) reported that education and employment were partially or not related in 1988, relative to the other survey years.

Finally, survey respondents were asked if they would select the same educational program if they had the choice to make again. While a clear majority of all post-secondary graduates reported that they would choose the same program again, there were some marked differences on this indicator across the four survey years. Among community college and university nursing graduates, the proportion selecting the same program decreased between 1978 and 1988, before increasing substantially in 1992. A similar though much weaker pattern is found for graduates of all non-nursing programs. Across the first three surveys, a higher proportion of university nursing graduates indicated they would select the same education program than graduates of community college nursing programs. The percentages found between graduates of the two types of nursing programs are closer by the 1992 survey.

These differences between community college and university nursing graduates may reflect the broader range of employment options or opportunities available to nursing graduates holding university degrees. University graduates, including those with specialization in nursing, could potentially find jobs outside of the nursing profession (i.e., teaching, health administration), which would not be accessible to graduates of shorter, specialized community college nursing programs.

Table 4

*Selection of Same Educational Program Again
by Program Type and National Graduates Survey*

National Graduates Survey

Year of Graduation	1976	1982	1986	1990
Year of Survey	1978	1984	1988	1992

COMMUNITY COLLEGE GRADUATES

Nursing Program Graduates

Yes, Would Select Same	72.7%	70.0%	62.9%	80.9%
No, Would Not Select Same	27.3	29.3	37.1	19.1
Weighted Total	5,500	4,600	6,200	5,650

All Other Program Graduates

Yes, Would Select Same	72.4%	63.9%	67.1%	76.5%
No, Would Not Select Same	26.6	35.6	32.9	23.5
Weighted Total	19,800	48,600	76,450	48,650

UNIVERSITY GRADUATES

Nursing Program Graduates

Yes, Would Select Same	82.9%	75.9%	72.5%	78.7%
No, Would Not Select Same	17.1	24.0	27.5	21.3*
Weighted Total	1,000	2,150	3,150	1,750

All Other Program Graduates

Yes, Would Select Same	73.3%	71.9%	71.5%	76.0%
No, Would Not Select Same	26.7	27.6	28.5	24.0
Weighted Total	63,450	96,450	115,150	118,800

* High sampling variability associated with this population estimate

Source: Statistics Canada National Graduates Surveys including
(1) 1978 Survey of 1976 Graduates, (2) 1984 Survey of 1982 Graduates,
(3) 1988 Survey of 1986 Graduates, and (4) 1992 Survey of 1990 Graduates

Discussion

A number of salient trends and patterns were observed across the four cohorts of graduates of Canadian nursing programs that highlight change in the school-to-work transition of nursing graduates over time. With respect to employment outcomes, it must be emphasized that the overwhelming majority of nursing graduates (well in excess of 90%) were employed two years after graduation; there is no evidence from

any of the surveys of an unemployment problem among Canadian nursing graduates. However, increases in part-time and temporary employment among nursing graduates across the four surveys points to increasing underemployment. The fact that "unavailability of full-time jobs" was the reason most commonly cited by nursing graduates for part-time employment is further evidence of the increasingly involuntary nature of part-time and temporary employment for a sizeable portion of Canadian nursing graduates. The nursing profession is not unique in terms of underemployment. Recent empirical research shows that the school-to-work transition has become increasingly difficult and prolonged for a large segment of labour force entrants across fields and professions.

Data from the four National Graduates Surveys reveal a close match between completed post-secondary studies and subsequent early career employment for the vast majority of nursing graduates, much more so than for graduates of non-nursing programs. Most nursing graduates were subsequently employed in jobs for which their educational program was designed, and in positions that required skills acquired through their post-secondary programs. This is not surprising, since post-secondary programs provide advanced, specialized training in nursing practice, which would serve as an *entrée* to subsequent employment in the profession, specialized training suited for specialized jobs in nursing.⁵ The close match between education and subsequent employment found for nursing graduates is certainly consistent with predictions based on the human capital model.

The nursing labour market has changed significantly in the 1990s, with downsizing of health-care institutions resulting in layoffs of large numbers of nursing staff. However, the impact on recent graduates (as reported by 1990 graduates surveyed in 1992) has not been as severe as expected given the scope of staff reductions in hospitals and other settings. Over 94% of these recent community college and university nursing graduates were employed in 1992, although higher proportions were employed in part-time and temporary jobs relative to previous cohorts of graduates. Consistent with earlier survey results, the vast majority of 1990 graduates, from nursing programs and post-secondary programs in general, indicated they would choose the same education if they had the decision to make again: at the time of the latest survey, in 1992, approximately four in five nursing graduates indicated they would choose the same education program again. Hence, despite current nursing labour market problems the vast majority of recent graduates still believe significant advantages are to be gained from completing post-secondary programs. This empirical evidence is

entirely compatible with the human capital model, which highlights investment returns from completing specialized post-secondary programs in nursing.

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Footnotes

1. "Nursing programs" include community college and university programs leading to a diploma or degree in "nursing." Programs designed for training nursing assistants (or practical nurses) and nursing aides are excluded from this classification.
2. These large-scale surveys are considered representative of the larger population of university and community college graduates across Canada for each of the respective cohort years. One important limitation to generalization of data results should be noted: for the 1978 survey of 1976 graduates, post-secondary institutions in the province of Quebec did not participate and hence graduates from educational programs in Quebec were excluded. Accordingly, statistical results from the first in this series of National Graduates Surveys can be generalized to the larger population of Canadian post-secondary graduates, excluding those from Quebec.
3. It is probable that many graduates of university nursing programs in particular will have acquired nursing training some time earlier (perhaps in a hospital program), and then returned to school to upgrade their credentials. Unfortunately, the National Graduates Surveys data sets do not provide sufficient detailed information to distinguish and separate those entering the labour force for the very first time from experienced nurses returning to school.
4. The two survey questions were, "Was your job [two years after graduation] one for which your program was designed?" and "In that job, did you use any of the skills acquired through the educational program?" An affirmative response to both questions signified that education and job were "closely related." A positive answer to one of the two questions denotes that the two were "partially related" and negative answers to both questions indicated that education and employment were "not related." For the purposes of this analysis, the latter two categories of the derived relationship variable were collapsed together, due to the very small numbers and proportions of cases found in the "not related" category. The small numbers and proportions create problems with high levels of sampling variability, which in turn precludes publicly releasing population estimates for this smallest category.
5. It is not possible to examine detailed occupation profiles for graduates due to data suppression on the Statistics Canada micro data tapes (designed to preserve anonymity and confidentiality of data on individual survey respondents). However, occupational classification is captured using two-digit (major group) Standard Occupational Classification (SOC) codes developed by Statistics Canada. Examining these available data across the four surveys, it is apparent that over three-quarters of university nursing program graduates and over four in five community college nursing program graduates were employed (two years after graduation) in "medicine and health" occupations (SOC major group 31).

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Health Promotion/La promotion de la santé

SPRING/PRINTEMPS 1997 (VOL. 29, NO.1)

Submission Deadline: September 15, 1996

Soumissions par le 15 septembre 1996

Developing Family/La croissance de la famille

SUMMER/ÉTÉ 1997 (VOL. 29, NO.2)

Submission Deadline: December 15, 1996

Soumissions par le 15 décembre 1996

Values & Decision Making/ Les valeurs et la prise de décision

FALL/AUTOMNE 1997 (VOL. 29, NO.3)

Submission Deadline: January 15, 1997

Soumissions par le 15 janvier 1997

Loss & Bereavement/La perte et le deuil

WINTER/HIVER 1997 (VOL. 29, NO.4)

Submission Deadline: June 15, 1997

Soumissions par le 15 juin 1997

Systems Research/La recherche sur le système

SPRING/PRINTEMPS 1998 (VOL. 30, NO.1)

Submission Deadline: September 15, 1997

Soumissions par le 15 septembre 1997

Gerontology/La g rontologie

SUMMER/ T  1998 (VOL. 30, NO.2)

Submission Deadline: December 15, 1997

Soumissions par le 15 d cembre 1997

Call for Papers / Articles à publier

Chronicity

Winter 1996 (vol. 28, no.4)

This issue is intended to make a contribution to the rapidly expanding body of nursing knowledge on chronicity. Topics with potential for enhancing the effectiveness of nursing intervention are of particular interest. Qualitative and quantitative research reports and state-of-the-science reviews about people and families living with chronic health conditions are invited.

Guest Editor: Dr. Sharon Ogden Burke

Submission Deadline: June 15, 1996

La chronicité

Hiver 1996 (vol.28, no.4)

Ce numéro se veut une contribution à l'ensemble des connaissances en sciences infirmières, qui se cessent de se développer, sur la chronicité. Les sujets présentant le plus d'intérêt sont ceux qui permettront éventuellement d'améliorer l'efficacité des soins infirmiers. On demande des rapports de recherche qualitative et quantitative, et des études sur l'état des sciences concernant les personnes et les familles aux prises avec des maladies chroniques.

Rédactrice invitée: Dre Sharon Ogden Burke

Date limite pour les soumissions: le 15 juin 1996

Please send manuscripts to/Prière d'envoyer les manuscrits à:

The Editor / La rédactrice en chef

Canadian Journal of Nursing Research

Revue canadienne de recherche en sciences infirmières

McGill University School of Nursing

École des sciences infirmières de l'Université McGill

3506 University, Montréal, QC H3A 2A7

The University of Alberta Faculty of Nursing

EMPLOYMENT OPPORTUNITY

The University of Alberta Faculty of Nursing invites applications for a teaching position beginning September 1996, at the assistant or associate professor level (\$36,325-\$68,056). Appointment salary is commensurate with qualifications and experience. Applicants should have a Ph.D. with established research potential. The applicants must also hold a current Advanced Practice Neonatal Intensive Care Nursing Certificate as duties will include teaching in the Advanced Practical Neonatal Intensive Care Nursing Certificate Program. A joint appointment with the appropriate clinical agency can be arranged as part of the position.

In accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents. Applicants should submit a curriculum vitae, a teaching dossier and the names of three referees to Dr. Marilyn J. Wood, Dean, Faculty of Nursing, University of Alberta, 3-129 Clinical Sciences Building, Edmonton, Alberta T6G 2G3 Canada.

Closing date: May 31, 1996

The University of Alberta is committed to the principle of equity in employment. As an employer we welcome diversity in the workplace and encourage applications from all qualified women and men, including Aboriginal peoples, persons with disabilities, and members of visible minorities.

University of New Brunswick

FACULTY OF NURSING

The Faculty of Nursing invites applications for a tenure-track position beginning July 1, 1996. Salary and rank will be commensurate with qualifications and experience. The appointee will be expected to work across the Masters and Baccalaureate programs. The Masters program is offered to both full- and part-time students, using distance technologies.

The preferred candidate will have: a graduate degree in nursing, a doctoral degree, current clinical expertise, and demonstrated excellence in research and scholarly endeavours. The candidate is required to have a strong background in nursing care of adults in acute-care settings. Strength in quantitative research methodologies is also a requirement. Experience in nursing education, particularly at a graduate level, would be an asset.

C.V. and references should be forwarded to:

Professor Penny K. Ericson, Dean
Faculty of Nursing, U.N.B.
P.O. Box 4400
Fredericton, N.B. E3B 5A3

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Deadline for Applications: March 31, 1996



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Initial teaching responsibilities will be with the on-campus B.Sc.N. program. Opportunity is also available for teaching in the distance education programs.

Minimum academic preparation and qualifications include a Master's degree in Nursing, a doctorate in nursing, teaching experience at the undergraduate level, a strong practice focus in community health, and mental health or gerontology, evidence of research and scholarly productivity, and eligibility for registration with the Registered Nurses Association of Nova Scotia.

The applications deadline is April 15, 1996. Applicants please submit a cover letter, curriculum vitae, a copy of current registration, and the names of three referees, including most recent employer, to:

Dr. Angela Gillis
Chair, Department of Nursing,
St. Francis Xavier University,
Box 5000 Antigonish, N.S. B2G 2W5
Fax (902) 867-2389

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Faculty, Nursing Programme

Health & Human Sciences

The University of Northern British Columbia is a new Canadian university which opened in September, 1994. UNBC has a regional mandate to serve the northern two thirds of the Province, with regional offices in Prince Rupert, Fort St. John and Quesnel, and a main campus located in Prince George (population 72,000). The Faculty of Health and Human Sciences invites applications for a tenure-track faculty position in the Nursing Programme in the area of Continuing Care Nursing.

The Nursing Programme provides nursing education at the undergraduate and graduate level with foci in the areas of: Community Health, Continuing Care, Aboriginal Health and Rural Nursing. The Programme offers a post-Diploma BSN and a nursing stream within an interdisciplinary MSC in Community Health programme. Planning for a collaborative BSN is under way.

You have a doctorate or equivalent with at least one degree in nursing, and are eligible for registration with the RNABC. You are expected to have a strong clinical background and focus in continuing care and/or gerontology as well as teaching experience, and a record of research and publication.

This position is subject to budgetary approval. Rank and salary are commensurate with education and experience. Please send your letter of application and curriculum vitae together with the names, addresses and fax numbers of three references, by **April 15, 1996** to: **Dr. Martha MacLeod, Chair, Nursing Programme, c/o Director of Human Resources, UNBC, 3333 University Way, Prince George, BC V2N 4Z9 Fax: (604) 960-5545.**

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Information for Authors

The Canadian Journal of Nursing Research is a quarterly journal. Its primary mandate is to publish nursing research that develops basic knowledge for the discipline and examines the application of the knowledge in practice. It also accepts research related to education and history and welcomes methodological, theory, and review papers that advance nursing science. Letters or commentaries about published articles are encouraged.

Procedure: Three double-spaced typewritten copies of the manuscript on 8 1/2" x 11" paper are required. Articles may be written in French or English. Authors are requested not to put their name in the body of the text, which will be submitted for blind review. Only unpublished manuscripts are accepted. A written statement assigning copyright of the manuscript to *The Canadian Journal of Nursing Research* must accompany all submissions to the journal. Manuscripts are sent to: The Editor, *The Canadian Journal of Nursing Research*, McGill University, 3506 University Street, Montreal, QC H3A 2A7.

Manuscripts

All manuscripts must follow the fourth edition of the *Publication Manual of the American Psychological Association*. Research articles must follow the APA format for presentation of the literature review, research questions and hypotheses, method, and discussion. All articles must adhere to APA guidelines for references, tables, and figures. Do not use footnotes.

Title page: This should include author name(s), degrees, position, information on financial assistance, acknowledgements, requests for reprints, address, and present affiliation.

Abstract: Research articles must include a summary of 100-150 words containing information on the purpose, design, sample, findings, and implications. Theory and review papers must include a statement of the principal issue(s), the framework for analysis, and summary of the argument.

Text: The text should not exceed 15 double-spaced typed pages. References, tables, and figures should follow the text.

References: The references are listed in alphabetical order, double-spaced, and placed immediately following the text. Author names and journal citations must be spelled out in full.

Tables and figures: Tables and figures should appear only when absolutely necessary. They must be self-explanatory and summarize relevant information without duplicating the content of the text. Each table must include a short title, omit abbreviations, and be typed on a separate page. Figures must be in camera-ready form.

Review process and publication information: *The Canadian Journal of Nursing Research* is a peer-reviewed journal. Manuscripts are submitted to two reviewers for blind review. The first author will be notified following the review process, which takes approximately 12 weeks to complete.

Electronic copy: Authors must provide satisfactory electronic files of the accepted final version of the manuscript.

Renseignements à l'intention des auteurs

La revue canadienne de recherche en sciences infirmières paraît quatre fois par année. Son mandat est de publier la recherche en sciences infirmières qui développe les connaissances de base dans la discipline et qui analyse la mise en pratique de ces connaissances. La revue accepte aussi des articles de recherche reliés à l'enseignement, l'histoire, et accueille des articles ayant trait à la méthodologie, la théorie, et l'analyse qui promouvoit le développement des sciences infirmières. Les soumissions de lettres et de commentaires sur des articles publiés sont aussi encouragées.

Modalités: Veuillez envoyer trois exemplaires de votre article dactylographié à double interligne sur des feuilles de papier de 216mm x 279mm. Il est entendu que les articles soumis n'ont pas été simultanément présentés à d'autres revues. Veuillez inclure avec votre article une déclaration de propriété et de cession de droit d'auteur.

Veuillez adresser vos manuscrits à la rédactrice en chef, *La revue canadienne de recherche en sciences infirmières*, Université McGill, 3506 rue University, Montréal, QC, H3A 2A7.

Manuscrits

Tous les manuscrits doivent se conformer à la quatrième édition du *Publication Manual of the American Psychological Association*. Les articles de recherche doivent suivre les consignes énoncées dans le «APA» en guise de présentation de la littérature, des questions de recherche et d'hypothèses, de la méthode, et de la discussion. Tous les articles doivent obéir au manuel «APA» pour les références, les tableaux, et les schémas. N'employez pas de notes au bas de la page.

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For further information please contact:

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