THE CANADIAN JOURNAL OF NURSING RESEARCH

Nursing Papers

Summer / Été 1988 Vol. 20 No. 2

REVUE CANADIENNE DE RECHERCHE EN SCIENCES INFIRMIÈRES

The Canadian Journal of Nursing Research
Revue canadienne de recherche en sciences infirmières

Volume 20, No. 2 **Summer/Été, 1988**

The Canadian Journal of Nursing Research/Revue canadienne de recherche en sciences infirmières is published quarterly by the School of Nursing, McGill University, 3506 University Street, Montreal, Quebec, H3A 2A7. Letters regarding subscriptions, changes of address and other business matters should be sent to the Managing Editor.

SUBSCRIPTION RATES: Institutions (including hospitals, schools, libraries and agencies): $36/one year; $68/two years. Individual subscriptions: $30/one year; $56/two years. Students $16/one year. Subscriptions through CAUSN $26/one year; $50/two years. Please add $5/year for overseas airmail service.

ADVERTISEMENTS: Full-page display $350; half-page display $225.

BACK ISSUES: are available at $8/copy or $30/year. Xerox copies of articles are available at 25 ¢/page, or a minimum of $3/article.

To ensure prompt service when you write us about your subscription, please include the address label from your *The Canadian Journal of Nursing Research* mailing envelope.

ABONNEMENTS: Institutions (ce qui comprend les hôpitaux, les écoles, les bibliothèques et les agences): 36$ pour une année; 68$ pour deux ans. Abonnements individuels: 30$ pour une année; 56$ pour deux ans. Étudiants: 16$ pour une année. Veuillez adjouter 5$ de plus pour les envois par avion outremer.

ANNONCES: 350$ la page; 225$ la demi-page

ANCIENS NUMÉROS: 8$ le numéro ou 30$ par année. On peut se procurer les photocopies d'articles pour 25¢ la page ou 3.00$ minimum par article.

Pour accélérer le service dans toute correspondance relative à votre abonnement, veuillez inclure l'étiquette de l'enveloppe dans laquelle vous sont envoyées les *Revue canadienne de recherche en sciences infirmières.*

ISSN 0318-1006
Dépot légal - 1er trimestre 1974; Bibliothèque Nationale du Québec

The Canadian Journal of Nursing Research
Revue canadienne de recherche en sciences infirmières

Volume 20, No.2 **Summer/Été 1988**

CONTENTS - TABLE DES MATIÈRES

DID YOU SEE THE EDITORIAL?

Thank you, I thought that caption might attract your attention. After all, who ever reads the editorial? I used this strategy because I wish to share with all of you some good news, as well as what I believe represents another step in the progress of our discipline in Canada.

Over the past few years, I have periodically written editorials about our struggles and problems in promoting research and in maintaining a peer-reviewed research journal. Not so long ago, I described some of our financial difficulties in maintaining this journal. In response to a plea at a meeting of the *Canadian Association of University Schools of Nursing*, I was reassured of the support of the deans and directors of university schools in this country. Among them, they contributed a substantial amount of money to prevent the journal from having to close its cover. The second sign of support which was also encouraging to the journal staff was the willingness of our subscribers to accept the slight increase in subscription rates. Between these two initiatives, we have been able to reverse the increasing deficit.

While it is logical that our own discipline would go to extraordinary measures to promote and save its scientific literature, one might not expect the same support from outside the discipline. However, our future has been secured for some time, from a financial point of view, by two federal funding sources. The *Medical Research Council of Canada* awarded us a grant for a three-year period to support the continuing publication of the journal. Shortly after the announcement of that grant, we learned that we had been successful in a journal grants competition sponsored by the *Social Sciences and Humanities Research Council of Canada.* Again, we have received a three-year grant for the continuing development of the journal. In addition to the immediate significance to the journal of these grants, I think there is a broader significance that reflects yet another sign of progress for the discipline of nursing. National recognition of our scientific literature and support for that literature is surely a sign of changing times.

In a previous issue, I described the joint MRC/NHRDP Development Grant as an important initiative for the future of nursing research in Canada. So, too, are the grants awarded to our research journal. Support for our research and for its publication represent significant milestones and assure future development in the discipline.

So, as you struggle with your grant application, or with the development of Ph.D. programs, or with entry to practice or with the shortage of practising nurses problem, be heartened by some good news. We are confident that you join us in our expression of gratitude to the deans and directors, the MRC and SSHRC for their support. I personally thank you for yours.

Mary Ellen Jeans

AS-TU LU L'ÉDITORIAL?

Merci! J'ai bien pensé que ce titre attirerait votre attention. Après tout, qui est ce qui prend la peine de lire l'éditorial? Je me suis servie de cette stratégie pour partager avec vous de très bonnes nouvelles et ce que je crois être une étape de plus dans le progrès de notre discipline au Canada.

Au cours des dernières années, il m'est arrivé régulièrement d'écrire des éditoriaux sur la lutte que nous menons et les problèmes que nous affrontons dans la promotion de la recherche et dans le maintien d'une revue de recherche évaluée par des pairs. Il n'y a pas si longtemps, je décrivais les difficultés auxquelles nous faisions face pour essayer de maintenir cette revue. Et, en réponse à ma demande lors d'une réunion de CAUSN, l'appui que m'ont démontré les doyennes et directrices des écoles universitaires canadiennes m'a fort rassurée. Entre elles, elles ont contribué un montant substantiel pour que la revue puisse continuer d'exister. Le second signe d'appui, très encourageant aussi pour le personnel de la revue, a été l'acceptation de la part de nos abonnés d'une légère augmentation du prix d'abonnement. Entre elles, ces deux initiatives nous ont permis to renverser le courant d'une situation déficitaire croissante.

Même si nous trouvons logique que notre propre discipline prenne des mesures hors pair pour promouvoir et sauver ses publications scientifiques, on ne s'attend pas toujours à recevoir le même genre d'appui de l'extérieur. Cependant, notre avenir est assuré d'ici un certain temps, du point de vue financier, par deux sources de financement fédérales. Le Conseil de recherches médicales du Canada nous a octroyé une subvention de trois ans dans le but de continuer la publication de la revue. Peu après avoir reçu l'avis de cette subvention, nous avons appris avoir gagné un concours parraîné par le Conseil de recherches en sciences humaines du Canada. Cette fois encore, il s'agit d'une subvention de trois ans, consacrée au développement de la revue. En plus de la signification immédiate de ces subventions pour la revue, je crois qu'on retrouve là une signification plus vaste - autre signe du progrès de notre discipline. La reconnaissance de nos publications à l'échelle nationale et l'appui envers ces publications sont des signes indubitables des temps qui changent.

Dans un numéro précédent, j'ai décrit la subvention pour le programme conjoint PNRDS-CRM pour le développement de la recherche en sciences infirmières comme étant une initiative importante pour l'avenir de la recherche en sciences infirmières au Canada. Cela est tout aussi vrai pour les subventions accordées à notre revue de recherche. L'appui accordé à nos recherches et à leur publication représente un événement marquant et hautement significatif et assure le développement futur de notre discipline.

Que vous vous débattiez avec des demandes de subvention, le développement de programmes de doctorat, l'entrée à l'exercice de la profession ou le manque de personnel infirmier, réjouissez- vous de nos bonnes nouvelles. Nous sommes confiants que vous vous joindrez à nous dans notre sentiment de gratitude envers les doyennes et directrices, le CRM et le CRSH pour leur généreux appui. Quant à moi, je vous remercie personnellement du vôtre.

Mary Ellen Jeans

This issue of *The Canadian Journal of Nursing Research/Revue canadienne de recherche en sciences infirmières* has been supported by a grant (SR-1) from The Medical Research Council of Canada.

La santé exige
plus qu'un remède.

Elle exige des soins.

L'infirmière: pour la

GESTION DE LA SANTÉ

■

Health demands
more than a cure.

It demands care.

Nurses for:

HEALTH MANAGEMENT

Ordre
des infirmières
et infirmiers
du Québec

THE WELL-BEING OF OLDER CANADIANS

Sr. Barbara Anne Gooding, Maureen Sloan and Rhonda Amsel

Longevity and declining birth rates have contributed to rapidly increasing numbers, actually and relatively, of aged individuals in developed countries. Currently in Canada, 2.5 million people are 65 years of age or older, representing at least ten percent of the population (Statistics Canada, 1985). Demographers tell us that this will change to 13 percent by the year 2000 and thirty years later will reach 24 percent (Denton, Feaver & Spencer, 1986).

Various professionals and organizations are actively involved in improving the state of health, housing and economics and are investigating many other areas of social concern related to the elderly population. Studies to evaluate the effectiveness of these efforts generally focus on particular groups of individuals. Occasionally, however, it is important to consider larger populations. A randomly selected, representative sample of a national population serves an important function for understanding members of that population and as a national base for comparison. Thus, the Canada Health Survey (Health and Welfare Canada, 1981) was conducted on such a representative sample and provides information on the Canadian population as a whole. For the currently reported study, the sample of subjects 65 years and over from the Health Survey population was judged to be representative of the Canadian elderly population.

The study reported here used an exploratory, multivariate design to address the following questions.

1. What is known about the well-being of today's elderly Canadians that can assist in providing a "good" or "better" life for tomorrow's elderly? and,
2. What set of factors is important in distinguishing older Canadians in terms of different levels of well-being?

Sr. Barbara Anne Gooding, N., Ph.D. is an assistant professor in the School of Nursing at McGill University. Maureen Sloan, N., M.Sc.(A) was a nurse educator at the Royal Victoria Hospital in Montreal and is now residing in Australia. Rhonda Amsel, M.Sc. is an instructor in the Department of Psychology and a consultant for nursing at McGill University, Montreal.

The Canadian Journal of Nursing Research *1988, 20(2), 5-18*

Specifically, the purpose of this study was to identify the socio-demographic, physical and psycho-social health status, and selected lifestyle factors that distinguish levels of well-being, as measured by the Bradburn Affect Balance Scale (1969), for the Canadian population 65 years of age and older. In keeping with the recommendation that archived data bases be used for seeking new information from already analyzed data to enhance the quality of life for the elderly (Cluff, 1981), this study was a secondary analysis of data from the national Canada Health Survey conducted in 1978-79 by Health and Welfare Canada (Health and Welfare Canada, 1981).

Background Information

Policy makers and planners must search for ways to maintain acceptable levels of quality of life for future populations, despite unknown factors and predictors. Providers of care are more concerned about specific groups within the population, yet they are influenced by information about provincial and national populations. Quality of life is a comprehensive and value driven concept. As such, it is difficult to identify its components for large populations. In terms of global health measures, long accepted standards such as mortality rates and life-expectancy indices are no longer adequate, partly because they do not take into consideration the current emphasis on the quality of the life (Kleinman, 1982). A very significant move beyond this approach has been the development of "Active Life Expectancy" by Katz and associates (Katz et al. 1983). As an alternate measure of health, this index reports the expected duration of functional well-being expressed as an index of activities of daily living (Katz & Akpom, 1976). By acknowledging the value of independent functional activity, this approach results in a measure of expected years of activity rather than merely the number of additional years to be expected. Using a different but similar approach with the Canadian population, Wilkins and Adams (1983) calculated an index of health expectancy that was defined as life expectancy in each of several different states of health.

Other concepts identified and evaluated as measures of quality of life for the elderly have included social constructs of health (Patrick, Bush & Chen, 1973); life satisfaction (Doyle & Forehand, 1984; Palmore & Kivett, 1977; Spreitzer & Snyder,1974); well-being (Andrews & Withey, 1976; Balaban, Sagi, Goldfarb & Nettler, 1986; Bradburn, 1969); and morale (Havighurst, Neugarten & Tobin, 1968; Kutner, Fanshel, Togo & Langner, 1956; Lawton, 1975; Morgan, 1976). The variety of concepts for quality of life and the even larger numbers of instruments used to measure these concepts have made it difficult to draw general conclusions from studies done. However, Larson (1978) has reported on a collection of thirty years of research on the subjective well-being of older Americans. He found that well-being was most strongly related to indicators of health. Socio-economic factors and degree of

social interaction were also related to well-being while age, sex, race and employment showed no consistent independent relation to well-being. A more recent study by Reker, Peacock and Wong (1987) reported linear trends showing that a sense of contentment, fulfillment and satisfaction were low during younger years and were highest in old age. Earlier, Doyle and Forehand (1984) had reported that the small negative correlation between age and satisfaction was largely eliminated when the factors of poor health, loneliness and money problems were controlled. These latter three factors were reported as the strongest negative correlates of life satisfaction across all age groups.

The study reported here addressed the specific concept of well-being for the elderly. This was accomplished by investigating the relationship between various health and lifestyle factors and the general well-being of the elderly Canadian population as measured by the Bradburn Affect Balance Scale (1969).

Methods

The data for this secondary analysis were taken from the 1978-1979 national Canada Health Survey (Health and Welfare, 1981). The survey instrument had been available to participants in either the French or English language. For the purposes of this study, the public use file from Statistics Canada was used. This placed some limits on the currently reported analyses, partly because of prior categorization of data. For example, age of subjects was available in five year increments up to the age of 69. However, all subjects 70 years of age and older constituted one age category. This is not an optimal grouping of ages for describing today's elderly population. There are increasingly more people beyond 80 years of age and the differences in characteristics between age levels beyond 70 years are becoming more meaningful.

Descriptive statistics were used in presenting the general findings of the survey. Discriminant analysis was used to determine the set of factors most strongly predictive of well-being. This multivariate technique determines the subset of variables that predicts group membership with the greatest statistical power. In this case, the groups were the states or levels of well-being, i.e. having a positive, neutral or negative affect balance.

The sample

The general purpose of the original survey was to obtain a global view of the health of Canadians. The design initially involved area cluster sampling of households within each province. It covered the non-institutionalized Canadian population, excluding residents of the Territories, Indian Reserves

and remote areas as defined by the Canadian Labour Force Study. Budgetary restrictions later limited the use of the original plan. Instead, a system of estimation procedures was developed which resulted in weighting mechanisms for different data collection instruments. Weights were further adjusted to account for non-response items in the nondemographic data and were used in the analyses reported here. This current secondary analysis was limited to data from men and women aged 65 and older.

Socio-demographic data on the sample are reported in Table 1. The sample included 1206 men and 1540 women aged 65 or older. More of the subjects, 62.2 percent, were in the older group, 70 years of age or older. Nearly three-fourths lived with others. Just over 60 percent of the subjects lived in Quebec or Ontario.

Table 1

Selected Characteristics of the Sample

		N	%
Sex			
	Male	1206	43.9
	Female	1540	56.1
	Total	2746	100.0
Age			
	65-69	1038	37.8
	70+	1708	62.2
	Total	2746	100.0
Household Composition			
	Lives alone	760	27.7
	Lives with others	1986	72.3
	Total	2746	100.0
Region			
	Atlantic	265	9.6
	Quebec	667	24.3
	Ontario	1008	36.7
	Prairies	464	16.9
	British Columbia	342	12.5

Measures

In the original study, a broad range of data collection instruments was used to examine the present health of the population, the consequences of various health problems and risk factors to future health. For this study, the following variables were selected as potential predictors of well-being and served as independent variables:

Socio-demographic
- Age
- Sex

Physical Health Status
- Activity limitation
- Duration of activity limitation
- Current drug use
- Visits to MD in past 2 weeks

Psycho-social Health Status
- Household composition
- Importance of religion
- Stressful life events in the past year

Lifestyle Factors
- Alcohol consumption
- Cigarette smoking

As with any secondary analysis, measures must be chosen from among an existing set of variables. For this study, the physical health status measures that were chosen included activity limitation and its duration as well as use of medication and the number of visits to a physician in the last two weeks. This provided a variety of physical health concerns that are of importance to the elderly. Psycho-social health status included household composition which was reported as living alone or with others. Importance of religion was included as a psycho-social health status measure because there often is a strong social component operative in most religions. The Social Readjustment Rating Scale (Holmes & Rahe, 1967) has been used extensively to determine the ranking of 43 life events, according to the level of stress they precipitate. For the purposes of this study, the scale provided a measure of the presence of these stressful life events. Physical and emotional energy are required to cope effectively with these stressors and, thus, have the potential of affecting the well-being of individuals. Two lifestyle factors, the use of alcohol and of cigarettes, were included because they are of current interest in relation to promotion of health. The subjects in this study would generally have formed habits related to alcohol and cigarettes prior to the current emphasis on their effects on health; therefore, it was of interest to see if there was a relationship with well-being for this elderly group.

The major dependent variable for this study was the Bradburn Affect Balance Scale. For the Canada Health Survey subjects responded in terms of the frequency (often, sometimes or never) of experiencing the following feelings during the few weeks prior to the interview: on top of the world, very lonely, particularly excited, depressed, pleased, bored, proud, restless, things going my way and upset. A single score was calculated and subjects were classified as having a positive, neutral or negative affect balance. McDowell and Praught (1982) have examined the psychometric merits of the scale using data from the Canada Health Survey and advocate its continued use. It was one of several scales examined by McCrae (1986) and found to be uncontaminated by socially desirable responses.

A single question addressing happiness was also used as a measure of well-being. Subjects were asked: Taking things all together how would you say things are these days-- would you say you are very happy, pretty happy or not too happy?

Results

In response to the first research question asking about the well-being of the current elderly population, the single question about overall feelings and the Bradburn Affect Balance Scale provided the measures of well-being. When asked about overall feelings, a large majority (nearly 77 percent) were pretty happy or very happy while only 12.3 percent reported themselves as being not too happy. Results are reported in Table 2.

Table 2

Overall Feeling: Canadians 65 and older

	N	%
Scale		
Very happy	524	19.1
Pretty happy	1583	57.7
Not happy	337	12.3
Missing	302	10.9

As reported in Table 3, scores on the Bradburn Affect Balance Scale showed that the highest percentage of subjects was in the positive affect group. Nearly thirty percent of the subjects had scores in the neutral category while a relatively large group, 24 percent, had missing data on items composing the scale and, therefore, were not classified. The effects of these and other missing data were somewhat diminished by substituting the group's mean score for missing values in all further statistical analyses.

Table 3

Scores on Well-being Scale: Canadians 65 and over

	N	%
Scale		
Positive	1116	40.6
Neutral	816	29.7
Negative	147	5.4
Missing	667	24.3

General beliefs about the elderly often include seeing them as very lonely, depressed and bored with their lives. These feelings are individual items in the Bradburn Scale and are reported here because of their particular relevance to the elderly population (see Table 4). The data reveal that members of this elderly Canadian population did not view themselves as lonely, depressed or bored. For each of these feelings, the largest number of responses was in the "never" category. Less than 10 percent reported experiencing any one of these feelings "often."

To evaluate differences in well-being related to age and sex, a two-way analysis of variance was done. Results are shown in Table 5. This revealed that the younger group, age 65-69, had significantly more positive scores (lower numerically) than those 70 years and older. There were no statistically significant differences between scores for males and females as well as none for age and sex interactions.

Table 4

Responses to Specific Affect Balance Items: Canadians 65 and over

Item	*Response* N (%) Often score=1	Sometimes score=2	Never score=3	Missing
Very lonely	183 (6.6)	737 (26.9)	1270 (46.2)	556 (20.3)
Mean 2.49				
Depressed	155 (5.7)	829 (30.2)	1176 (42.8)	586 (21.3)
Mean 2.47				
Bored	252 (9.2)	904 (32.9)	1066 (38.8)	524 (19.1)
Mean 2.37				

Table 5

Mean Well-being Scores by Age and Sex

Age	Sex M	F
65-69	1.43 (SD=.56)	1.52 (SD=.60)
70+	1.57 (SD=.64)	1.57 (SD=.64)

p<.001 for age differences
Not significant for sex differences

Regional differences in well-being for this elderly sample were also explored. Residents of British Columbia had the highest well-being scores while those in Quebec had the lowest. An analysis of variance showed that British Columbia residents had significantly higher scores than those in Quebec and Ontario ($p<.05$).

In response to the research question related to identifying the variables that distinguish various levels of well-being, the multivariate step-wise discriminant analysis was used. Table 6 shows the results of the initial analysis with each variable individually. There were seven predictors that, in themselves, made some statistically significant discrimination among the well-being groups. They were the following: age, visit to a physician, cigarette smoking, drug use, presence and duration of functional limitation and presence of stressful life events. As shown in Table 7, further analysis resulted in five variables with a correlation with the discriminant function of .40 or greater. These variables, therefore, constitute the set that is most strongly predictive of well-being. Examination of the average scores for these variables revealed that Canadians 65 years of age or older who are more likely than their counterparts to have a positive affect are those with minimal limitation of activity, limitation of shorter duration, taking fewer drugs, not having visited a physician in the past two weeks and experiencing fewer stressful life events.

Table 6

Univariate F-Ratio and Significance Level of Independent Variables in Relation to Well-being (before discriminant analysis)

	F	Significance
Household composition	.7311	.48
Age*	5.603	.01
Sex	2.626	.07
Visit to MD*	19.39	.01
Cigarettes*	3.017	.04
Drug variety*	23.59	.01
Functional limitation*	51.61	.01
Duration of limitation*	44.21	.01
Alcohol	2.989	.05
Importance of religion	2.587	.08
Stressful life events*	15.37	.01

*$p<.05$

Table 7

Ranked Correlations Between Discriminating Variables and Discriminant Function

Discriminating Variables	Correlation
Functional limitation	.76
Duration of limitation	.68
Drug variety	.52
Visit to MD	.45
Stressful life events	.41

Limitations

Obviously, there are some limitations with a study such as this. While the sample is well selected and representative of the entire population, it is a large sample and, thus, shows some statistically significant differences that represent minimal differences in actual scores or little clinical significance. In addition, many different questionnaires and instruments were used for the Canada Health Survey but not all subjects were asked to complete all instruments. Therefore, to maintain representativeness of the population it was necessary to use only the variables that were contained in the same battery and, thus, were weighted in the same way. For example, in this study more information would have been obtained by using the measure of physical activity index instead of the more specific measure of activity limitation. The index measure could not be used because it required weightings that were different from those of other variables chosen for the analysis.

Discussion

Notwithstanding its limitations, this study reports that subjects representative of the elderly Canadian population have described themselves as having a positive sense of well-being and happiness. These results are in contrast to the morbid, deeply depressed view of older people that is often held by the general public and at times by health professionals. The study provides information that can serve as an educational tool for those who associate with the elderly, either professionally or socially, as well as those who desire to plan actively for a positive well-being in their own later years.

The study has implications for planning and delivering programs of service for the elderly population. Planners with a sound knowledge of the current perception of well-being among the elderly are more likely to design services that promote maintenance or improvement in quality of life rather than those that encourage dependency and limited activity.

While much progress has been made in the recent past regarding the potential for happiness in later years, it remains important to continue to identify factors that are related to well-being in the elderly. It is also important to promote the use of this knowledge by professionals in all disciplines who plan and provide services and care. For individuals in the general population, knowledge about the high levels of well-being possible in the later years can be a motivating force for making decisions earlier in life that prepare for greater happiness later on.

In general, the results of this study on a nationally representative sample are in agreement with the studies reviewed earlier. Measures of physical health status have been found to be most significant in predicting well-being in the elderly (Doyle & Forehand, 1984). Although not reported according to age groups, the results of the recent Canada Health Promotion Survey show that activity limitation is inversely related to happiness (Epp, 1987). In the current study, little or no physical limitations or limitations of short duration were the strongest predictors of positive well-being. Limited drug taking and visits to a physician were next in predictive strength. Thus, it can be said that physical health factors in general are of the highest importance in predicting well-being in later years. This finding supports the current trend of efforts toward physical fitness that may lead to healthier physical states in later life. A recent study by Brown and McCreedy (1986) found that health protective behaviour was not related to overall health status. Therefore, more research is necessary to determine the relationships between health behaviours and health status and, consequently, factors that affect the quality of life in the elderly.

Contrary to some other research (Larson, 1978), psycho-social health factors and life style factors were not found to be as important as physical health status in relation to well-being. This may represent the use of a strong capacity for coping and adapting to the social circumstances of one's life. It may also be reflective of the fact that nearly three-fourths of this population lived with others. This lack of variability may have diminished the effect of the relationship between well-being and the particular psycho-social health factors chosen for this study.

Although the actual differences in scores in well-being for different regions were small, the findings support consideration for two major factors: climactic conditions and mobility patterns. It is generally accepted that many older

British Columbia residents have had the desire and the financial resources to relocate in that province particularly for the retirement years. At the same time it is likely that the population of Quebec represents people with strong linguistic and family ties that tend to limit their mobility. As well, the severity and length of winter months in Quebec differ greatly from climactic conditions in British Columbia. Physical functioning and activity may be limited significantly and the resultant social isolation may all contribute to the lower sense of well-being among elderly Quebec residents. Surely, these are areas needing much further study before conclusions can be drawn.

In summary, this study has demonstrated that the noninstitutionalized elderly population of Canada considers itself to be happy and to have a positive outlook on life. Physical health status measures, particularly activity related, are considered most important in determining well-being status. Contrary to some other studies, age (though poorly grouped in these data), sex and living arrangements as well as psycho-social health and lifestyle factors were relatively unimportant in relation to well-being among the Canadian elderly.

REFERENCES

Andrews, F.M. & Withey, S.B. (1976). *Social indicators of well-being*. New York:Plenum.

Balaban, D.J., Sagi, P.C., Goldfarb, N.J. & Nettler,S. (1986). Weights for scoring the quality of wellbeing instrument among rheumatoid arthritics: A comparison to general population weights. *Medical Care*, 24, pp. 973-980.

Bradburn, N.M. (1969). *The structure of psychological well-being*. Chicago: Aldine Publishing Company.

Brown, J.S. & McCreedy, M. (1986). The hale elderly: Health behavior and its correlates. *Research in Nursing & Health*, 9, pp. 317-329.

Cluff, L.E. (1981). Chronic disease, function and quality of care. *Journal of Chronic Disease*, 34, pp. 299-304.

Denton, F.T., Feaver, C.H. & Spencer, B. (1986). Prospective aging of the population and its implications for the labour force and government expenditures. *Canadian Journal on Aging*, 5, pp. 75-98.

Doyle, D. & Forehand, M.J. (1984). Life satisfaction and old age. *Research on Aging*, 6, pp. 432-448.

Epp, J. (1987). *Active health report*. Ottawa, Canada.

Havighurst, R., Neugarten, B. & Tobin, S. (1968). Disengagement and patterns of aging. In B.N. Neugarten (Ed.), *Middle age and aging*. Chicago: University of Chicago Press.

Health and Welfare Canada. (1981). *The health of Canadians: Report of the Canada Health Survey*. Ottawa, Canada.

Holmes, T.H. & Rahe, R.H. (1967). The social readjustment rating scale. *Journal of Psychosomatic Research*, 11, pp. 213-218.

Katz, S. & Akpom, C.A. (1976). A measure of primary sociobiological functions. *International Journal of Health Services*, 6, pp. 493-508.

Katz, S., Branch, L., Branson, M., Papsidero, J., Beck, J. & Greer, D. (1983). Active life expectancy. *New England Journal of Medicine*, 309, pp. 1218-1224.

Kleinman, J.C.(1982). The continued vitality of vital statistics. *American Journal of Public Health*, 72, pp. 125-127.

Kutner, B., Fanshel, D., Togo, A. & Langner, T. (1956). *Five hundred over sixty*. New York: Russell Sage Foundation.

Larson, R. (1978). Thirty years of research on the subjective well-being of older Americans. *Journal of Gerontology*, 33, pp. 109-125.

Lawton, M. (1975). The Philadelphia Geriatric Center Morale Scale : A revision. *Journal of Gerontology*, 30, pp. 85-89.

McCrae, R.R. (1986). Well-being scales do not measure social desirability. *Journal of Gerontology*, 41, pp. 390-392.

McDowell, I. & Praught, E. (1982). On the measurement of happiness. *American Journal of Epidemiology*, 116, pp. 949-958.

Morgan, L. (1976). A re-examination of widowhood and morale. *Journal of Gerontology*, 31, pp. 448-455.

Palmore, E. & Kivett, V. (1977). Change in life satisfaction: A Longitudinal study of persons aged 46-70. *Journal of Gerontology*, 32, pp. 311-316.

Patrick, D.L., Bush, J.W. & Chen, M.M. (1973). Toward an operational definition of health. *Journal of Health and Social Behavior*, 14, pp. 6-21.

Reker, G.T., Peacock, E.J. & Wong, P.T.P. (1987). Meaning and purpose in life and well-being: A life-span perspective. *Journal of Gerontology*, 42, pp. 44-49.

Spreitzer, E. & Snyder, E. (1974). Correlates of life satisfaction among the aged. *Journal of Gerontology*, 29, pp. 454-458.

Statistics Canada. (1985). *Canada year book 1985*. Ottawa, Canada.

Wilkins, R. & Adams, O.B. (1983). Health expectancy in Canada, late 1970s: Demographic, regional, and social dimensions. *American Journal of Public Health*, 73, pp. 1073-1080.

RÉSUMÉ

Le bien-être des Canadiens du troisième âge

Cette étude s'adresse aux questions suivantes: 1) Que sait-on sur le bien-être des Canadiens du troisième âge? et 2) Quels sont les éléments qui distinguent les personnes âgées en termes de différences d'état de bien-être? Une conception exploratoire et descriptive a été employée et les données prises du dernier sondage du ministère de la Santé (1978-79). Parmi les variables indépendantes, on compte la situation socio-démographique, le style de vie, et les éléments de santé physiques et psycho-sociaux. La variable dépendante majeure s'est démontrée être le niveau de bien-être tel que mesuré par l'échelle affective de Bradburn (Bradburn Affect Balance Scale). Les résultats ont montré que cette population âgée a dit jouir d'une qualité de vie relativement élevée. Des différences mineures ont apparu selon l'âge et la région, aucune cependant selon le sexe. Une analyse discriminante a démontré que les éléments touchant à la santé physique étaient ceux qui jouaient le plus dans la prédiction d'une perspective positive envers la vie. Contrairement aux résultats obtenus d'autres études, l'âge, le sexe et le milieu se sont démontrés relativement sans importance. Ces résultats indiquent que les dernières années de vie peuvent être heureuses et que les personnes âgées qui réussissent à conserver une bonne santé physique sont plus aptes à faire preuve d'un état accru de bien-être.

ACTUAL DECISION MAKING: FACTORS THAT DETERMINE PRACTICES IN CLINICAL SETTINGS

Dayle Hunt Joseph, Jeannette Matrone and Elaine Osborne

Decision making is an integral part of nursing practice. In this era of expanded practice, nurses are expected to participate actively in decision making with regard to the care of clients. Decision-making skills are an inherent part of nursing curriculums throughout the United States. Students are now expected to demonstrate these skills on state board examinations.

Findings of several researchers have given credence to the notion that nurses do use some form of decision analysis when choosing particular options for patient care (Baumann & Bourbonnais, 1982; Benner, 1984; Corcoran, 1986; Grier, 1976; Thompson & Sutton, 1985). Little information is given, however, about the types of decisions nurses do make and the activities surrounding those decisions. In conversations with nurses, they frequently discuss, in a cavalier fashion, the kinds of decisions they make throughout the course of a day. In this particular study, an attempt was made to investigate those every day decisions empirically, so that a better understanding of the scope of decision making in nursing practice can be realized.

Kim (1983) developed a typology for nursing care decisions in which three types of decisions - program, operational control and agenda were identified. In Kim's model, these types of decisions are "assumed to directly affect the client and...decision responsibilities rest primarily on the professional nurse, independent of medical control" (Kim, 1983, p. 276). Although the researchers in this study examined carefully Kim's typology, we were hesitant to consider only those decisions within the purview of nursing. As will be demonstrated throughout the findings, nurses are making decisions commonly thought of as being in the province of medicine. The findings reported in this paper substantiate the typology described in Kim's work, and implicate variables that influence decision making.

Dayle Hunt Joseph, R.N., Ph.D. is Assistant Dean and Assistant Professor in the College of Nursing at the University of Rhode Island, in Kingston. Jeannette Matrone, R.N., M.S. is Nurse in Chief and Elaine Osborne, R.N., M.S. is Associate Nurse in Chief at Miriam Hospital in Providence, Rhode Island.

The Canadian Journal of Nursing Research *1988, 20(2), 19-31*

Background

Nurses working in hospitals are often criticized for their lack of decision-making skills. Many, even those within the profession, seem to believe that the hospital nurse functions less autonomously than his or her counterpart who practises in the community. There are many questions that arise about the responsibilities of nurses who work in hospitals. Policy may have some influence upon practice, but the researchers suspected that is not a strong predictor of decision making.

In a preliminary study, the researchers conducted in-depth, taped interviews with registered nurses working in staff positions in a major metropolitan hospital. In an attempt to review the data objectively, the researchers independently listened to the tapes and identified themes that consistently appeared throughout the interviews.

Nurses continually reported that they did make decisions about the clients' plan of care. They believed that it was their responsibility to appropriately intervene and felt that many physicians, not all, supported their actions. In other words, it is not unusual for a nurse to order a blood test, cancel an x-ray or change the client's activity level. When asked to discuss hospital policy, the majority of nurses seemed convinced that policy did not meet the needs of current practice. They felt that they were responsible for the client's well-being and that if they failed to intervene, the client would suffer needlessly. When discussing actual decisions that were made, some nurses asked that the tape recorder be turned off; they knew that their practices were not always covered by hospital policy(Joseph, Matrone & Osborne, 1984).

This interview process documented the notion that nurses do, in fact, make decisions. Repeatedly, nurses made statements such as:

"If I know the patient takes Tylenol at home, I give the patient 2 tablets and notify the doctor when he visits the unit."
"If I am not happy with the intern's response, I notify his superior and suggest that which I feel should be done."
"Nurses are patient advocates, of course we make decisions."

There were two other important observations made from this preliminary investigation. The staff nurses were very clear that they did not mind assuming decision-making responsibility for most clients. However, many stated that if the client's physician was not supportive of this practice, and if they had had previous negative interactions with a particular physician, they would not act autonomously. They refused to make necessary decisions for these doctors' clients because they feared repercussions. Although nurses make decisions, these decisions are, often, contingent upon their ideas of col-

laboration with the physician. The following comment is typical: "If it is Dr. X's patient, I do what is needed, and then tell him what I've done. If it's Dr. Z.'s, I get all the orders first because I know he won't approve."

Some of the nurses interviewed believed that the physician should make all the decisions. They felt less comfortable assuming this type of a role. Many of those nurses who worked in critical care units felt that nurses who worked on the regular units were resistant to any kind of decision making. One nurse, in particular, recounted the following.

"I've literally had a nurse restrain my hands, telling me not to give the IV drug I was about to bolus because there was no order. The patient desperately needed it. In intensive care, we give such medications all the time; if we didn't the patients would die!"

It seemed to the investigators that decision-making practices differed between those nurse working on the general medical surgical units and those working in critical care units.

This qualitative data, collected over the course of a year, was the impetus behind the development of two instruments: Perceptions of Collaborative Relationships (PCR) and Actual Decision Making (ADM). The questions were designed from information collected during the interviews. Face validity was obtained by preliminary testing of both instruments. The questionnaires were first administered to four experts - master's prepared nurses who were prepared as clinical nurse specialists. After this initial review, the instruments were further refined. All confounding items which were identified by these judges were removed from the questionnaires. The instruments were then pilot tested. The results will be shared in this paper.

Statement of the Problem

The purpose of this study was to determine the effects of perceptions of collaborative relationships, attitudes toward decision making and clinical practice setting upon actual decision-making practices. There were two null hypotheses in this study. They were:

Perceptions of collaborative relationships, attitudes toward decision making and type of unit do not significantly influence the actual decision-making practices of nurses.

There is no difference in the decision-making practices of nurses working in critical care and general medical-surgical units.

Speedling, Ahmadi and Weissman (1981) report that nurses believe that physicians do not really understand the role of nursing and that they are less

apt to seek the opinion of the nurse. "Physician-nurse relationships have been characterized in general by an enduring pattern of physician dominance and nurse deference, with increasing conflict between the two groups" (Prescott & Bowen, 1985, p. 127).

Prescott and Bowen (1985) used both questionnaires and interviews to examine collaborative relationships between nurses and physicians. Two hundred sixty-four nurses and 180 physicians were interviewed. Approximately 70% of both groups agreed that the relationship between nurses and physicians was positive. When describing negative relationships, nurses tended to discuss a lack of respect, while physicians discussed demeanor with the physician as well as the clinical competency of the nurse. The questionnaires were obtained from a much broader population - 1044 staff nurses and 536 physicians. The composite variable that appeared to be of importance was based upon responses to four items that dealt with clinical competence and respect.

Reichman (1984) posits that the perceptions of the patient, the nurse and the physician in regard to the role of the nurse in the hospital are quite diverse. He believes that both patients and physicians view the role of nurse as physician-helper. Nurses are beginning to view themselves as a separate profession and believe that part of their role is to participate in collaborative decision making. Reichman does not discuss any methodology, which unfortunately limits the usefulness of these perceptions.

Joseph (1985) found that nurses do believe that they should be making decisions. A sample of 85 female staff nurses responded to the Joseph Decision Making Tool (JDMT) which is designed to measure attitudes about decision making. Approximately 60% of the staff nurses answering the questionnaire indicated that nurses should make decisions. These findings supported earlier ones obtained during the pilot testing of the JDMT (Joseph, 1982).

Jenkins (1985) developed an instrument to measure perceptions of clinical decision making. The Clinical Decision Making in Nursing Scale (CDMNS) was tested on 111 undergraduate baccalaureate students from the sophomore, junior and senior levels. Students in this study did not perceive themselves to be capable decision makers. These findings are consistent with those of other researchers (Kaperson, 1985; Mahoney, 1980; McIntyre, McDonald, Baily & Claus, 1972). Although Jenkins' findings are of importance, it must be remembered that a student, rather than an actual nurse population was used. Also, this study looked primarily at perceptions that do not always realistically reflect that which is done.

Grier (1976) investigated the relationship between intuitive decisions and those made by employing quantitative techniques. Forty-seven registered

nurses were asked to quantify 185 decisions. Significant agreement was found between Expected Value and the ranking of actions. The actions chosen were consistent with the nurses' value of outcome. Grier clearly documented that nurses do make decisions.

Corcoran (1986) investigated decision-making practices of novice and expert nurses. Like Benner (1984), Corcoran found that expert nurses do utilize different thought processes when making decisions. Although Corcoran's work deals primarily with information processing, it is noteworthy to mention that both novice and expert nurses engage in decision making with regard to the plan of care for hospice patients.

Kim's (1983) work on a typology for nursing care decisions identified three types of decisions - program, operational control and agenda. Kim (1983) defines program decisions as those that relate to goals for client care. These kinds of decisions, generally, involve use of the nursing care plan and strategies for teaching. Operational control decisions are those that address nursing actions, are situationally controlled and often require immediate attention. These kinds of decisions are routinely made when nurses make decisions about withholding medications, changing dressings and ambulating clients. Agenda decisions are those that are applied to priority and time sequencing. Such decisions involve planning of daily routines of care.

Joseph et al. (1984) conducted in-depth, taped interviews of 16 medical-surgical nurses currently practising in a major metropolitan primary nursing setting. Nurses were first asked to discuss whether they make decisions and then to identify the types of decisions they made. Answers to this latter question usually fell into the classification of operational control decisions or those that deal primarily with nursing action. Nurses frequently discussed the need to alter or to withhold specific treatments or medications. They also recognized that many of these decisions seemed to cross the traditional boundary of medicine, but felt strongly that it was their responsibility to make these decisions. Some program decisions were identified as well. They discussed such issues as teaching and discharge planning.

Method

This preliminary study was used as the basis for developing an instrument to measure actual decision-making practices of registered nurses. The semi-structured interviews were tape-recorded. The tapes were reviewed independently by the three researchers and content was analyzed for recurring themes. Decisions were examined carefully and classified according to Kim's typology. There was an interrater reliability of approximately 95% for the types of decisions that were identified.

Instruments

A Likert-type instrument titled "Actual Decision Making" (ADM) was developed. This instrument consists of 27 items which specifically relate to nursing actions. Subjects are asked to choose an answer using a 5-point scale. Scores range from 27 to 135 with a mean score of 73. Subjects who score higher than 73 are considered to be decision makers. The instrument was reviewed for face and content validity by a panel of four expert judges who were master's prepared nurse clinicians. The instrument was then pilot tested using 91 subjects, all of whom were registered nurses practising in staff positions on either a critical care or a general medical-surgical unit. An alpha coefficient of 0.88 was obtained for the preliminary testing of this instrument. Modest reliabilities of 0.50 and 0.60 are considered acceptable in the preliminary stage of any instrument construction (Nunnally, 1978); as such, the reliability coefficient of 0.88 associated with this study's instrument is quite respectable.

To insure the content validity of the instrument further, a research assistant spent six weeks observing nurses at work in the clinical settings. The findings from this participant observation study confirmed that nurses do make decisions and that they accurately self-report about those decisions (Joseph, Matrone & Osborne, 1986). This study supported our pilot testing of the ADM, in that the findings were similar to those found initially when interviewing subjects.

The perceptions of Collaborative Relationships instrument or measure (PCR) was developed in a fashion similar to that of the ADM. A modest preliminary reliability of 0.63 was obtained. This is a 10-item questionnaire that utilizes a Likert-type format. Scores range from ten to 100 with the mean score of 37 (80). Subjects who scored over 37 are considered to perceive their relationships with physicians as being collaborative.

The JDMT, which has known reliabilities of Cronbach's alpha 0.79 (Joseph, 1982) and 0.72 (Joseph, 1985), was used to measure attitudes towards decision making. Joseph (1985) used this instrument to measure the relationship between sex-role stereotype, years of experience and education upon attitudes towards decision making. This instrument consists of 20 short scenarios that reflect specific situations that call for nursing decisions and actions. Scores range from 20 to 100 with a mean score of 51. Subjects scoring below 51 believe that they should be making decisions. The directions for completing this instrument are explicit. Subjects are told that they are to pretend that no hospital policy exists and that they are to respond according to their beliefs about decision making. This tool is designed to measure beliefs and attitudes rather than decision-making practices of registered nurses. The JDMT has known reliability and validity. Factor analyses of the

JDMT has demonstrated that certain types of decisions involve more risk than others (Joseph, 1985).

Sample

The target population for this pilot study was a moderate size metropolitan hospital located in the northeast area. Questionnaires were distributed on both critical care and general medical surgical units. Nurses working in administrative positions were not included in the sample; it has been demonstrated that these nurses tend to take on the value system of the dominant culture and respond differently than staff nurses. Questionnaires were administered to staff nurses who worked on all three shifts (days, evenings and nights).

Prior to data collection, subjects were invited to participate in the study. They were informed that this participation was voluntary and that all information obtained from the study would remain anonymous. A heterogeneous sample of 91 nurses was obtained. These nurses, ranging in age from 22 to 60 years, had different levels of education and nursing experience. Subjects were given approximately one hour to complete the three questionnaires. In most instances, the completed questionnaires were left in a sealed packet and retrieved by a graduate student. There were 140 packets containing the following: Demographic Data Sheet, JDMT, PCR, ADM and a completed consent form. The response rate was 65% (N = 91) which is a respectable rate for this type of investigation.

Results

This study investigated variables that influenced actual decision-making practices. It was therefore appropriate to consider the cumulative effect of these variables upon decision making. Multiple regression allows for prediction of the criterion variable (in this case actual decision making) from knowledge about predictor variables. A correlation matrix was generated to demonstrate relationships between the criterion and predictor variables. When analyzing these relationships, determinations can be made about the predictive ability and the relative importance of each variable (Fox, 1982).

A Pearson r was computed as an additional method of examining which of the variables related to the JDMT (Table 1). There is a highly significant relationship between attitudes toward decision making and actual decision-making practices.

A stepwise multiple regression procedure was utilized as a method of determining which of the variables more potently influenced actual decision making (see Table 2). It is clear from this table that the JDMT, or attitudes

toward decision making, was the best predictor of actual decision making. Perceptions of collaboration and type of nursing unit contribute minimally to the overall variance (33%) which is explained by this regression analysis. This result is a significant finding because approximately one third of the variance can be explained by attitudes.

Table 1

Pearson Correlation Coefficients Describing the Effects of the type of Unit, Attitudes Toward Decision Making (JDMT), Actual Decision-making Practices (ADM) and Perceptions of Collaborative Relationships (PCR)

	Unit	JDMT	ADM	PCR
Unit	1.000			
JDMT	-.148	1.000		
ADM	.141	-.564*	1.000	
PCR	.114	-.057	.150	1.000

n=91
*p<0.01

Table 2

Stepwise Regression Analysis of the Variables that Predict Actual Decision Making

Variables	R^2	Beta Coefficients
PCR	.022	.112
JDMT	.318	-.550
Unit	.019	.04671
Total	.333	

n=91, df=87
*p=0.0000

The Beta weight for the JDMT further supports this variable's prediction of actual decision making, as it is large. Beta weights enable the researcher to estimate the contribution of each of the variables in the equation and to determine the relationship between the predictor and the criterion variables (Waltz & Bausell, 1981). The scoring of the JDMT influenced the Beta weights. The JDMT is scored in the opposite direction of the ADM. Thus, there is an inverse relationship indicating that subjects with low scores on the JDMT had higher scores on the ADM. Subjects who believed they should make decisions were likely to make decisions.

A Mann Whitney U-test was used to determine the differences in decision making between nurses working in critical care and those working in general medical-surgical units. The Mann Whitney U-test was chosen because it is a "relatively powerful alternative to the usual t-test for equality of means" (Hays, 1973, p. 778). This is a non-parametric statistic that tests the difference in the ranks of scores of two independent groups (Polit & Hungler, 1987). In this study, no differences were found between the two groups of nurses.

Discussion

The findings of this study reject the first null hypothesis: *Perceptions of collaborative relationships, attitudes towards decision making and type of unit do not significantly influence the actual decision-making practices of nurses.* The results of this study support the fact that attitudes about decision making are reflective in the decision-making practices of nurses. The combined effects of the three variables in question explain 33% of the variance. This is a significant finding which lends credence to the notion that attitudes are important.

The second null hypothesis: *There is no difference in the decision-making practices of nurses working in critical care and general medical-surgical units* was accepted. The findings supported this hypothesis. Although in an initial study (Joseph, Matrone,& Osborne, 1984) nurses from critical care units seemed to report more decision making, no significant differences were determined between the two groups. However, the two groups of nurses were not evenly distributed in the sample. The general medical-surgical group represented 64% of the sample ($N_1 = 67$), while the critical care group represented 36% of the sample ($N_2 = 24$).

In a follow-up study (Joseph, Matrone & Osborne, 1986) it was determined that decision making occurs routinely as part of nursing practice. Both groups of nurses were found to engage in decision-making practices. These findings are encouraging as it is clear that decision making is practised throughout the hospital setting.

This study also adds to an expanding body of knowledge about instrument development. The JDMT was retested for reliability (Cronbach's alpha 0.72) and far within the modest range (.50 to .60) established by Nunnally (1978) for early stages of instrument construction. Having an alpha reliability of 0.88, the ADM has a robust internal consistency. This finding is further substantiated in a subsequent study (Joseph et al., 1986). A factor analysis will be reported in a subsequent publication. The PCR did not have as stable a reliability (Cronbach's alpha 0.63). This instrument consisted of only ten questions that may have negatively influenced the reliability findings. All three of the questionnaires were easy to administer, requiring less than an hour to complete.

Implications

This study addresses a very important issue in nursing practice - decision making. It verifies the belief that nurses in practice do participate in decision-making activities. The findings support Kim's typology of decision types. The ADM instrument specifically asks nurses to document the kinds of decisions they do make. Items that relate to dispensing "over the counter" medications and treatments, to ordering and canceling diagnostic tests and to determining patient activity are addressed in this instrument. The majority of items can be classified as operational control decisions, as they relate to practice decisions that often require immediate attention. It is evident from this study that nurses do cross traditional boundaries in medicine when making decisions. Practice and policy standards need to be established to legally support nurses in these activities, as they are viewed as routine and indicative of competent practice.

It is important to note that staff nurses were the target population in this study. The researchers believe that these are the nurses who interact daily with clients, and that their ability to engage in decision making is a critical component of the client's care. Staff nurses must have the support and encouragement of administration when making decisions. There is always an element of risk in decision making and nurses must be prepared to be accountable. Administrators should establish reasonable policies that allow for flexibility and encourage safe practice. Joseph (1985) found that 60% of the nurses studied believed that it was within nursing's realm to make decisions. Nurse educators must prepare nurses for this very important function.

It is evident from this preliminary investigation that nurses in the practice setting willingly make decisions. Most see decision making as an important part of their practice as a professional nurse. The boundaries between nursing and medical decisions are not easily distinguishable. Nurses often find themselves in situations that legally require a physician to make the decision. The nurses felt, however, that waiting for the physician to respond, in many

cases, has the potential of causing harm or undue discomfort to the patient. Nurses are making knowledgeable decisions that are based on their education and their practical experience. A closer look at legal issues needs to be undertaken by administrators and rules need to be updated. This can be accomplished by collaborative efforts between nursing and medicine, as both groups take a realistic look at the practice setting of the 1980s. Although the findings pertaining to collaboration with physicians were not significant, nurses continually referred to collaboration as improving client care. Many of these same nurses easily identified several physicians with whom they felt a colleagial rapport had been established.

Limitations

These findings cannot be generalized to the entire population of staff nurses working in hospitals. The agency chosen for this study has a well-established primary nursing model in place. Nurses working in this hospital are accountable to clients for 24 hours. It is not unusual to observe physicians looking for the primary nurses to discuss their (nurse and doctor's) client. This hospital has a Collaborative Practice Model partially implemented. A heightened awareness of collaboration may have influenced perceptions of collaboration.

Further replication of this work is needed. A larger, more diverse sample comparing nurses working in urban and suburban settings would be interesting. Another area that is in need of investigation is the study of decision-making practices of nurses as they ascend the hierarchy of professional growth - from staff nurse to supervisor.

Decision making is an important aspect of clinical practice. Both educators and administrators should be cognizant of the changes that are occurring at the bedside so that adequate supports can be provided to nurses who daily deliver care to clients. They must be good role models themselves, by creating an environment of trust and respect within which staff nurses can develop their decision-making abilities.

REFERENCES

Baumann, A. & Bourbonnais, F. (1982) Nursing decision making in critical care areas. *Journal of Advanced Nursing*, 7 433-446.

Benner, P. (1984). *From novice to expert excellence and power in clinical nursing practice.* Menlo Park, CA: Addison- Wesley.

Corcoran, S. (1986). Task complexity and nursing expertise as factors in decision making. *Nursing Research*, 35(2),

Fox, D. (1982). *Fundamentals of research in nursing* (4th ed.). Norwalk, CT: Appleton-Century-Crofts.

Grier, M. (1976). Decision making about patient care. *Nursing Research*, 25(2), 105-110.

Hays, W. (1973). *Statistics for the social sciences* (2nd ed.). New York: Holt, Rinehart and Winston.

Jenkins, H. M. (1985, July/August). A research tool for measuring perceptions of clinical decision making. *Journal of Professional Nursing*, pp. 221-229.

Joseph, D. H. (1982) *Variables which influence the nurse's attitude toward decision making*. Unpublished doctoral dissertation, Boston University. Boston. Mass.

Joseph, D. H. (1985). Sex-role stereotype, self-concept, education and experience: Do they influence decision making? *International Journal of Nursing Studies*, 22(1), 21-32.

Joseph, D. H., Matrone, J. & Osborne, E. (1984). A qualitative study examining decision-making. Unpublished study.

Joseph, D. H., Matrone, J. & Osborne, E. (1986). Clinical decision making: Development and testing of an instrument. Unpublished study.

Kaperson, C. J. (1985). An exploration of the relationship between performance, decision making, and structure. *Human Relations*, 38(5), 441-456.

Kim, H. S. (1983). Collaborative decision-making in nursing practice: A theoretical framework. In P. L. Chinn, *Advances in nursing theory development*. Rockville, MD: Aspen.

Mahoney, E. (1980). Decision making by senior students in baccalaureate nursing programs. PhD Dissertation, Columbia University Teachers' College, New York.

McIntyre, H., McDonald, F., Baily, J. & Claus, K. (1972). The development of a simulated clinical nursing test to assess problem-solving behavior of baccalaureate students. *Nursing Research*, 21, 429-435.

Nunnally, J. (1978). *Psychometric theory*. New York: McGraw-Hill.

Polit, D. & Hungler, B. (1987). *Nursing research principles and methods* (2nd ed.). Philadelphia: J. B. Lippincott.

Prescott, P. & Bowen, S. (1985, July). Physician-nurse relationships. *Annals of Internal Medicine*, 103(1), 127-133.

Reichman, S. (1984). Conflicts and collaboration: Nurse-physician issues in the hospital. *Bulletin of the New York Academy of Medicine*, 60(8).

Speedling, E. J., Ahmadi, K. & Weissman, G. K. (1981). Encountering reality: Reactions of newly hired RNs to the world of the medical center. *International Journal of Nursing Studies*, 18, 217-225.

Thompson, R. & Sutton, T. W. (1985) Nursing decision making in a coronary care unit. *International Journal of Nursing Studies*, 22(3), 259-266.

Waltz, C. & Bausell, G. (1981). *Nursing research: Design, statistics and computer analyses.* Philadelphia: F. A. Davis.

The authors wish to thank Patricia Euphemia, R.N., M.S., and Susan Zwolinski, R.N., M.S., both of whom collected data when they were research assistants in the College of Nursing at The University of Rhode Island.

RÉSUMÉ

Situation réelle des pratiques décisionnelles: les éléments déterminant la pratique en milieu clinique.

Le but de cette étude pilote était de déterminer l'effet des perceptions des relations collaboratives, des attitudes envers la prise de décision et du milieu de pratique clinique sur les pratiques décisionnelles réelles du corps infirmier. Des données qualitatives recueillies à partir d'entrevues en profondeur ont été utilisées pour développer et éprouver à titre d'essai deux instruments: Les perceptions des relations collaboratives (PCR) et la prise de décision réelle (ADM). Le PCR contient dix questions et utilise l'échelle de type Likert à 5 points pour mesurer les croyances sur les relations collaboratives avec les médecins. Un niveau de fiabilité alpha de 0,63 a été obtenu. Le ADM contient 27 questions et demande aux infirmières de fournir un autorapport sur leur pratiques décisionnelles réelles selon une échelle de fréquence.

Après six semaines d'observation intense des participants, les chercheurs ont conclu que l'instrument reflète les pratiques décisionnelles des infirmières autorisées. On a trouvé l'instrument utile et facile à administrer. Un niveau alpha de 0,88 de Cronbach a été obtenu. L'instrument décisionnel de Joseph (JDMT) a été utilisé pour mesurer les attitudes envers la prise de décision (alpha de 0,79 de Cronbach; deuxième tour: 0,72). Un design exploratoire avec une population hétérogène de 91 infirmières permanentes employées soit dans des unités de soins intensifs soit dans des unités médicales-chirurgicales dans un milieu de soins primaires a été utilisé. Aucune différence importante ne s'est manifestée entre les infirmières des soins intensifs et celles des unités médicales-chirurgicales. Toutefois, une analyse régressive a identifié le fait que les trois variables en questions comptaient pour 33% de la variante dans la prise de décision réelle. Les attitudes envers la prise de décision se sont avérées un prédicteur hautement significatif dans la prise de décision réelle ($p = .0000$). Ces résultats ont des implications pour tous ceux intéressés à définir l'étendue du secteur infirmier, puisqu'ils donnent un aperçu précieux du type de décision prise par les infirmières.

The University of New Brunswick
is seeking candidates for the position of

DEAN OF
THE FACULTY OF NURSING

to assume the Deanship effective July 1, 1989 or as soon thereafter as possible.

Candidates should have outstanding qualifications and suitable academic and administrative experience. The successful applicant is expected to provide strong and imaginative leadership in all aspects of the Faculty's academic programs and in sustaining and developing productive relationships with the professional community in the province.

The Faculty, with 32 FTE members, offers the Basic Bachelor of Nursing degree program and the Post R.N. Bachelor of Nursing program. Full-time enrollment is about 250 and part-time enrollment, principally in the Post R.N./B.N. Program, is about 300. Further development of current programs, of research activity and development of a graduate program are among Faculty priorities for the future.

The University of New Brunswick has a total enrollment of about 7,500 full-time and 2,500 part-time students. The Faculty of Nursing is located on the Fredericton Campus with teaching liaison to the Saint John Campus.

Applications should be submitted to:

Dr. R. E. Burridge
Vice-President (Academic)
University of New Brunswick
Box 4400
Fredericton, New Brunswick
Canada E3B 5A3

UNIVERSITY OF NEW BRUNSWICK

MARKETING BACCALAUREATE ENTRY TO NURSING PRACTICE IN CANADA

Sharon Richardson and Jennifer Sherwood

Marketing in Canadian nursing is a recent innovation. Unlike the United States, where marketing is intrinsic to an entrepreneurial health care delivery system, Canadian health care professionals historically have had little reason to engage in marketing activities. Recently, however, several Canadian professional nursing associations have begun to develop specific marketing programs to promote baccalaureate entry to nursing practice. The purpose of this article is to explore further how the concept of social marketing might be applied to the position of the Canadian Nurses' Association (CNA) that, by the year 2000, the minimum education for entry to practice should be a baccalaureate degree in nursing.

The perceived need for marketing, what constitutes social marketing, constraints of social marketing, rationales for social marketing in nursing and strategies for marketing the entry to practice position will be presented. Recommendations about strategies for marketing the entry to practice position will be based on published policy statements of involved interest groups. These recommendations will focus on the marketing roles that might be assumed by professional nursing associations and university faculties of nursing.

The Need for Marketing

Until recently, there has been limited expressed opposition to requiring a baccalaureate degree for entry to nursing practice by the year 2000. Ten of 11 Canadian provincial and territorial professional nursing associations have taken an entry to practice position similar to the CNA's. A review of the newsletters of the provincial professional associations over the last two years reveals increased planning for implementation of the proposed educational standard by the year 2000. However, during 1987, nurses' unions and

Sharon Richardson, R.N., Phd.D. is Associate Professor in the Faculty of Nursing at the University of Alberta, in Edmonton. Jennifer Sherwood, R.N., M.Ed. is Nursing Consultant - Professional Issues with the Alberta Association of Registered Nurses in Edmonton, and is a doctoral candidate.

The Canadian Journal of Nursing Research *1988, 20(2), 33-48*

provincial governments in New Brunswick, Ontario and Alberta expressed public concern about the baccalaureate entry to practice position.

Nurses' unions concerns

In New Brunswick, in May, 1987, the Nurses Association of New Brunswick (NANB), the professional association composed of 7,600 members 4,500 of whom are unionized, rejected the CNA baccalaureate entry to practice position (NANB, 1987a, p.1). This vote was subsequently declared void because of a regional voting irregularity (NANB, 1987a, p. 1). In Ontario, the Ontario Nurses Association (ONA), the union for approximately 36,000 Ontario registered nurses, conducted a June, 1987, mail ballot seeking support of the ONA Board of Director's position that, "The union does not support the B.Sc.N. as the Entry to Practice as the concept is currently structured" (ONA, 1987, p. 4). Although fewer than 3,000 (10%) of ONA membership participated in the vote, 2,494 of those who did, endorsed the ONA Board's position (Lynn, 1987). At the United Nurses of Alberta (UNA) Annual Meeting in November, 1987, approximately 60% of delegates passed a policy resolution presented by the Executive Board of UNA that "U.N.A. is opposed to the position taken by the Professional Association that the minimum standard for Entry to Practice be a Baccalaureate Degree" (Alberta Association of Registered Nurses, 1987a, p. 2). UNA is the collective bargaining agent for almost half of Alberta's registered nurses.

Provincial government concerns

In 1984, the Registered Nurses Association of Ontario (RNAO) received a letter from the Ontario Ministers of Health and Colleges and Universities that stated in part, "Current activities of your Association aimed at marketing and implementing the baccalaureate requirement for all registered nurses...are not in the best interests of either the nursing profession or the people of Ontario" (RNAO, 1984, p. 12). Enclosed with the letter was the *Government of Ontario Position Regarding Entry to Practice as a Registered Nurse in Ontario, November 30, 1983.* The rationale for the Ontario government's opposition to the RNAO's position was that it was necessary to define the skills required for various levels in nursing and to substantiate that baccalaureate entry to practice would improve the quality of health care. The Government's position statement concluded with the sentence, "Therefore, based on available evidence, the Government of Ontario does not support R.N.A.O.'s [baccalaureate entry to practice] position" (Registered Nurses Association of Ontario, 1984, p. 13).

In a May, 1987 letter jointly written by the Alberta Ministers of the Department of Hospitals and Medical Care and by the Department of Advanced Education to the President of the Alberta Association of Registered Nurses

(AARN), the Alberta Government (1987) reaffirmed its 1977 position that it did not support making the baccalaureate degree in nursing a minimum requirement for entry to practice, although it would "continue to support increased opportunities for baccalaureate level training in nursing where the need for such training can be demonstrated". The Alberta Government cited as reasons for its position the belief that, "The public and the service sector are satisfied that the diploma prepared nurses are capable of meeting patient care needs within the present health care system" and that baccalaureate entry to practice "could have adverse effects on nursing manpower supply and on health care and educational costs in Alberta". To date, the Ontario and Alberta governments are the only provincial governments to state publicly their formal opposition to the baccalaureate entry to nursing practice position of the CNA and ten of its 11 member associations.

Whatever the background of this recent opposition to baccalaureate entry to practice, it is evident that there exists a pressing need to address expressed concerns. One way of doing so is through increased social marketing of the position.

Marketing

To most people, the term marketing still connotes a function peculiar to business firms, because it is seen as the task of finding and stimulating buyers for the firm's output (Kotler & Levy, 1978). In the traditional sense of marketing, the product rather than the consumer is the focus of attention.

However, recent definitions of marketing reflect the philosophy that decisions of an organization should be made in light of consumer needs and wants and that the first and most important step in applying the concept of marketing is acceptance of a consumer orientation (Fine, 1981; Kotler, 1982; Montana, 1978). This broadened concept has also involved expanding the nature of the products marketed by organizations to include promoting and accepting ideas, attitudes, beliefs and images (Walker, 1985). Kotler and Levy (1978) believe that every organization produces a product of at least one of the following types: physical products, services, persons, organization and ideas. Lovelock and Weinberg (1984) state that, "Marketing is concerned with the process by which people adopt, maintain, or discard patterns of behavior - or accept ideas and beliefs that are often precursors of behavior" (p. 10).

Social marketing

In Canada, examples abound of organizations striving to motivate the public to adopt a new idea or practice. These efforts may be called education campaigns by supporters or propaganda efforts by opponents. For example,

through its Participaction program, the Canadian government wants people to become more physically active and fit. The Canadian Cancer Society wants people to stop smoking. Provincial governments want citizens to wear seat belts while driving and most have passed laws requiring behavioral conformity. Pro-life groups want women to carry all pregnancies to term while the pro-choice groups want women to have a choice in whether or not to obtain an abortion. The list of examples is long.

Although effective communication is necessary to market an idea successfully, it is not sufficient, by itself. As with any product, an understanding of the needs, perceptions, preferences, reference groups and behavioral patterns of the target audience is required. Additionally, it requires the tailoring of messages, media, costs, and facilities to realize the objective. Kotler (1984) calls these tasks social marketing. Brehony, Frederiksen and Solomon (1984) among others, believe that some of the strategies successfully employed by professional commercial marketers can also be used to facilitate the adoption of a specific attitude to social issues. Nonetheless, they assert that there are some fundamental differences. Specifically, they cite ethical concerns and the different needs and mandates of commercial and nonprofit organizations.

Constraints to social marketing

Critics of social marketing charge that it is a waste of money, is intrusive and is manipulative. Wagner (1978) comments that some professional organizations consider it undignified and lacking in professional ethics to market their services. Lovelock and Weinberg (1984) observe that some public and nonprofit administrators perceive marketing not only as unethical but also inappropriate for their type of organization. Many administrators find marketing terminology unseemly and arcane. In some cases, nonprofit service agencies such as universities and hospitals have experienced so much demand for so many years that, until recently, they had no need for marketing strategies (Kotler, 1982).

Marketing in health care raises not only concerns about unethical behaviour, increased costs and consumer manipulation, but also accusations of promoting competition and leading to unnecessary utilization of services (MacStravic, 1978; Norkett, 1985). Ruderman (1986) notes that in the American health care system, marketing is mainly encountered in competition for market shares, which involves considerable expenditure in an attempt to get consumers to sign up with one health maintenance organization in preference to another, or to patronize one hospital rather than another. Many Canadians perceive such marketing as both repugnant and irrelevant. As Ruderman (1986) comments, "The frequent references to this process in American periodicals have led to the feeling in Canadian health circles that marketing as a whole is somehow disreputable" (p. 315).

Another factor identified by Ruderman (1986) that he believes contributes to Canadians' reluctance to engage in marketing as it relates to social causes, is the fact that, while marketing has been taught for years in Canadian community colleges and university business administration programs and is also offered as a doctoral subject in graduate schools of business, little application has been made to health care. As a specific example of the lack of acceptance of the significance of marketing for health promotion, Ruderman notes that, of the 200 papers presented on the theme of health promotion at the June, 1986 Canadian Public Health Association's annual conference, only two titles contained the word "marketing". Not only does it appear that social marketing, as it relates to health care in Canada, is still in its infancy, but also that "The first step must be the diffusion of marketing concepts and methods in the health profession and this has barely begun" (Ruderman, 1986, p. 316).

Marketing and Nursing

It has been argued that nurses, like administrators of nonprofit organizations, have failed to recognize the importance of marketing. They may even find the concept offensive. Three reasons for this have been postulated by Eliopoulos (1985). First, marketing appeared as a strategy appropriate only for commercial enterprise. Secondly, marketing required taking the initiative in relating service to consumer and nurses traditionally have habituated themselves to reacting to patients, doctors and other nurses. Thirdly, marketing implied a gain for the individual or organization that markets and nurses perceived marketing to be in conflict with the altruistic ethos of nursing. Nonetheless, Brown (1985), Eliopoulos (1985), Norkett (1985) and Walker (1985) assert that marketing is a legitimate professional activity for nurses and Nursing.

In particular, Walker (1985) perceives some of the benefits to be gained through marketing to be the development of the nursing profession, appreciation of nurses by other professional colleagues and a sense of pride among nurses. She also believes that visibility through successful marketing facilitates recruitment and retention of practising nurses by health care agencies and of nursing students by educational programs.

While it may be argued that promoting a positive image of nursing as a profession more closely resembles propagandizing than marketing, marketing strategies could facilitate achievement of one current goal of professional nursing -- requiring a baccalaureate degree in nursing as the minimum education for entry to practice in the future.

Marketing Baccalaureate Entry to Practice

Marketing the policy of baccalaureate entry to practice is an example of the social marketing of an idea or a belief. The increasing complexity of health care environments and the increased knowledge necessary to practise nursing professionally, led the CNA to pass the resolution on baccalaureate entry to practice for the year 2000 at its 1982 biennial convention. Implementation of this position could be facilitated by the application of social marketing.

Social marketing requires understanding of the needs, perceptions, preferences, reference groups and behavioral patterns of the target audiences, and the tailoring of messages, media, costs and facilities to maximize the ease of adopting the idea. The use of Kotler's (1982) seven major steps in the planning of a social marketing campaign seem relevant to the marketing of the baccalaureate entry to practice position. The steps are: problem definition; goal setting; target market segmentation; consumer analysis; influence channels analysis; marketing strategy and tactics; and, program implementation and evaluation. In the following section, each of these steps is explored in more detail.

Problem definition

Before beginning any promotional activities, it is important that the purpose of such activities is clear. Is the purpose to create a commitment to the requirement of a baccalaureate degree in nursing to enter practice in the future, or is it to identify the impact of the position on nurses currently practising?

Kotler (1975) has classified eight types of demand in marketing: unwholesome, overfull, full, irregular, faltering, latent, no demand and negative demand. The last two categories have characterized the circumstances for marketing entry to practice in Canada.

From 1979 to 1986, the entry to practice position statements from most provinces were clearly related to education for the practice of nursing in the future. The marketing problem originally defined was what Kotler (1975, p. 80) would call "no demand". The objectives and tasks of marketing when there is no demand, are to create the demand, regulate its level and maintain it. During this period each provincial professional nursing association established some form of special committee or task force on entry to practice and the mandates of these committees were similar. Each was charged with the task of developing the background and rationale for the position and planning for the implementation of baccalaureate entry to practice by the year 2000 (N. Murphy, personal communication, November 3, 1987). While the plans in each province implicitly or explicitly included a marketing dimen-

sion, it was clear that the focus of marketing activities was to create a demand for baccalaureate-prepared nurses to provide nursing care in the future.

More recently, associations have adopted the view that other problems associated with the proposed change in the educational standard must be addressed. The growing opposition from the nurses' unions in Ontario, New Brunswick and Alberta, and the overt opposition from the Alberta and Ontario governments, points to what Kotler (1975, p. 81) would call a "negative demand". A negative demand is one in which people actively dislike and will pay a price to avoid having that which is being marketed. Negative demands are far more difficult to address from a marketing perspective than no demand at all. To begin to overcome the negative marketing demand associated with the baccalaureate entry to practice position, it will be necessary to make baccalaureate programing more available, accessible and appealing in order to attract more students. An increase in the number of baccalaureate in nursing students should lead naturally to an increase in the number of baccalaureate graduates entering nursing practice. As the proportion of practising nurses prepared at the baccalaureate level increases, acceptance of the baccalaureate entry to practice position should logically follow. With only approximately 12% of Canadian registered nurses currently educated at the baccalaureate level (Statistics Canada, 1986) it is not surprising that diploma-prepared practising nurses have begun to question the requirement of a baccalaureate degree in nursing.

Three provincial associations have already specifically addressed the negative market demand of diploma nurses. The Alberta Association of Registered Nurses has divided into two parts its 1985 policy plan, *Educational Preparation for Professional Nursing in the Year 2000: An Action Plan for 1985-2000*. The first part, retitled "Entry to Practice 2000: An Action Plan for 1987-2000" presents a marketing approach that continues to be based on a market problem of no demand. It is clearly aimed at future practitioners of nursing and on changes that must be made to the Alberta education and health care delivery systems. The second part, retitled "Entry to Practice 2000: Impact on Diploma Prepared Nurses - An Action Plan for 1987-2000" addresses the marketing problem of negative market demand by focussing on concerns of current AARN membership regarding their access to post-diploma baccalaureate education in nursing. The second part also reinforces assurances offered previously by the AARN: that diploma-prepared nurses would continue to be registered beyond the year 2000; that career planning services would be provided; that assistance would be available for diploma educated nurses desiring baccalaureate education; and, that access to post-diploma baccalaureate programs would be improved.

Similarly, in Ontario and New Brunswick, indicators of a negative market demand from the Ontario Nurses Association and the New Brunswick Nurses Union, respectively, have prompted provincial associations to refocus their marketing efforts. The Registered Nurses Association of Ontario expanded the mandate of its task force on baccalaureate entry to practice to include "development of strategies to enable diploma prepared nurses to obtain higher education" (RNAO, 1986, p. 12). The Nurses Association of New Brunswick has established a special committee that has two sub-committees - Career Planning for Diploma Educators and The Rights of Diploma Nurses in the Future - to focus on negative market demands (NANB, 1987b).

If, as has been suggested, short-term problem definition should focus on the negative market demand of baccalaureate entry to practice, then provincial nursing associations should emphasize internal marketing of the position to their membership; that is to say, to nurses currently practising. The overwhelming majority of these members are prepared at the diploma level. Their acceptance and endorsement of the position is important. University faculties of nursing could increase enrollment opportunities, promote distance education and generally increase accessibility of baccalaureate in nursing education as marketing strategies to overcome the negative market demand. Practising nurses who find it difficult to get into baccalaureate programming probably perceive such a position as a threat to their own career progression and job security.

Goal setting

Social marketers should set measurable goals that they can reasonably hope to accomplish. Professional associations and university faculties may have different motivations in establising such goals.

Provincial professional associations continue to perceive implementation of baccalaureate entry to nursing practice by the year 2000 as a realistic goal. This implies that, by the year 2000, the associations will have had sufficient impact on public policy formulation to enable restructuring of each province's nursing education system. In turn, this will mean that only baccalaureate programs receive provincial approval and only baccalaureate graduates are eligible to write nurse registration examinations.

University faculties, on the other hand, may decide that an initial goal of increasing the number of baccalaureate graduates within a specified period of time is more realistic than requiring all entrants to possess a baccalaureate degree in nursing. Funding cuts in Canadian university budgets during the past few years have made expansion of existing baccalaureate nursing programs extremely difficult and the creation of new programs improbable.

Therefore, efforts to increase the overall number and proportion of baccalaureate graduates in nursing have had to focus on increasing the number of students in existing programs and on alternative programing formats. Innovative teaching strategies, such as distance delivery and attempts at collaboration between existing diploma and degree programs have resulted. University opinion may also be that gradual phasing in of baccalaureate entry to practice is more likely to be a palatable political goal than restructuring of existing provincial nursing education systems.

Despite potential differences between provincial professional associations and university faculties of nursing with regard to the time frame, there appears to be consensus that the goal is both desirable and feasible in Canada.

Increased baccalaureate enrollment will necessitate an increased number of nurses educated at the graduate level to teach in these programs. Therefore, a short-term goal for university faculties of nursing should be to increase availability and access to masters programs and to establishing at least two doctoral programs in nursing in Canada. Doctorally-educated nurses will be required as teachers in the expanded masters programs. Professional associations might promote doctoral education by lobbying provincial governments and other nursing education stakeholders, and by offering nurses financial assistance to pursue doctoral education.

Target market segmentation

Target market segmentation increases the impact of social marketing by allowing specific segments to be the focus of marketing and by studying the behaviour of each segment to identify the most cost-effective marketing strategies. Murphy (1984) describes market segmentation as breaking down a total heterogeneous market into smaller, more homogeneous groups that the social marketer can probably satisfy. Once the market is segmented, three target marketing strategies are possible.

Undifferentiated marketing involves the decision to identify the entire market with the idea of selling one idea or service. This would mean that the baccalaureate entry to practice position would be marketed in the same way to government, other health care professions, practising nurses, post-secondary institutions, regulatory bodies and any other stakeholders. In contrast to this, concentrated marketing entails targeting only a narrow market segment and developing a service to meet this group's needs. An example would be a provincial professional nursing association's decision to limit marketing efforts to post-secondary educational institutions. While concentrated marketing might be appealing because it allows a focus on one segment of the market, and is therefore less onerous financially and in terms of

time, manpower and commitment, its impact on a complex public policy issue would likely be negligible. A third strategy is differentiated marketing, which entails recognizing that the market contains several segments and then developing services to meet the needs of differing groups. Differentiated marketing seems to be most appropriate for this complex social idea. It could take into account varying needs of groups as diverse as politicians, bureaucrats, post-secondary institutions, agencies employing nurses, nurses' unions, prospective and current nursing students and practising nurses.

Legislation, regulations and standards for registration as a nurse are provincially mandated; therefore, the roles of the national and provincial professional nursing associations are also differentiated with respect to marketing. At the national level, the CNA appears to have recently divided its target market into two segments: the provincial professional nursing associations and the CNA membership. Because ten of 11 provincial and territorial nursing associations have adopted the position, the CNA's role has become the ongoing provision of information to those associations. In relation to the CNA membership target group, the board of directors in October, 1987, approved three foci for resolution of issues associated with a "blurring between continuing education for nurses today and educational requirements for nurses in the future" (Canadian Nurses Association, 1988, p.42). These foci are as follows: development of a forum on baccalaureate nursing education for the future to be held in 1989; establishment of a regular column in *The Canadian Nurse* to highlight the CNA goals and how these goals are to be achieved; and, a one-half day think tank at the time of the February, 1988 board meeting to review the issues and look at planning for the ensuing 13 years (CNA, 1988, p. 42).

At the provincial level, examples of differentiated marketing of the position are evident in documents and committee structure of the AARN, the NANB and the RNAO. Specific strategies have been proposed for two specific market segments: practising diploma nurses; and, those external to the profession, such as lay and professional groups, government and career counsellors (AARN, 1987(a); NANB, 1987(b); RNAO, 1986, p.12).

Consumer analysis

Opinions about the entry to practice policy and what process would be necessary to help move people from their present attitudes and behaviours to the desired ones must be researched. Practising nurses constitute a meaningful sector of each province's voting population. As such, their views will influence elected politicians who are responsible for enacting provincial laws and regulations. Thus, the beliefs of practising nurses, more than 80% of whom have a diploma as their highest level of nursing education and most of whom belong to a union, are significant to the social marketing of the entry to practice position.

The major nurses' unions in New Brunswick, Ontario and Alberta seem to have had relative success in marketing the disadvantages of the proposed change to the entry to practice standard. This points to a need for extensive and immediate consumer analysis of this target market segment to clarify what unionized nurses actually think about the entry to practice position and what would be necessary to help them accept the concept. Logically, such analysis lies within the scope of influence and responsibility of provincial professional nursing associations.

Influence channel analysis

Multiple channels are needed to influence various segments of the target market and some channels will be more important than others. For example, mass media communication may be helpful to raise general public awareness of a concept such as the entry to practice position, but may do little to change the opinions of such segments as non-nurse health care professionals who have a vested interest in nursing education. Although nurses today have increased expertise in selecting and influencing influence channels, especially mass media channels, this is one aspect of a social marketing campaign for which expert consultation might be beneficial.

Provincial professional nursing associations might consider changes in committee structure to involve increased numbers of members in marketing activities and assigning political lobbyist roles to salaried staff. For example, the Alberta Association of Registered Nurses recently established a special committee on political action and created two new salaried staff positions - a Public Relations Officer and a Nursing Consultant: Professional Issues - to assist in marketing health care issues.

While formal political lobbyist roles may not be perceived as appropriate to the mission of university faculties of nursing, either by university administration or by faculty members themselves, such activities are legitimately within the purview of provincial professional associations.

Marketing strategies and tactics

Additional strategies for marketing a social concept may be generated by brainstorming and reviewing the four p's of the marketing mix - product, price, place and promotion. Education, health and social services are provincial legislative responsibilities; Table 1 shows an application of the four-p framework to provincial level marketing of baccalaureate entry to nursing practice.

Each of the strategies presented in Table 1 can be further elaborated. For example, in Nova Scotia, creation of new baccalaureate programs coupled

with increased enrollment quotas in existing baccalaureate programs is envisaged (Rovers, 1987), whereas in Ontario and Alberta, collaborative baccalaureate programing involving existing colleges and university faculties of nursing, is being explored (RNAO, 1987, p. 29; Wood, 1987). Making baccalaureate programing readily accessible by promoting distance delivery teaching could lead to evaluations of technique in various provinces. Elaboration of each strategy presented in Table 1 would require collaboration of provincial professional associations and university faculties of nursing in each province.

Table 1

Application of the "Four P" Framework to Promoting Baccalaureate Entry to Nursing Practice in Canadian Provinces

---

Product Strategies

Increase baccalaureate program enrollments while decreasing diploma programs enrollments.

Alter existing provincial legislation to grant approval only to nursing schools offering baccalaureate degrees.

Redefine basic nursing education in provincial legislation as a baccalaureate degree in nursing.

Expand masters in nursing programing.

Establish doctoral programing in nursing in Canada.

Price Strategies

Increase numbers of nursing practice positions requiring baccalaureate education.

Obtain factual information about actual per graduate costs of educating both diploma and baccalaureate nursing students.

Negotiate adequate educational leave provisions as part of nurses' collective agreement.

Demonstrate the cost effectiveness of using baccalaureate nurses to deliver patient care.

Demonstrate the cost effectiveness of baccalaureate nurses to provide primary health care.

Fund increased number of masters and doctoral students.

Place Strategies

Increase accessibility of baccalaureate programing in each province, e.g. promote distance delivery teaching.

Facilitate inter-institutional transfer of academic credits for baccalaureate degrees.

Develop collaborative baccalaureate nursing programs among post-secondary educational institutions, e.g. colleges and universities.

Use challenge mechanisms for awarding university credit.

Promotion Strategies

Restrict diploma program advertising while increasing baccalaureate program advertising.

Provide all high school and other career counsellors with information about the baccalaureate entry to practice position.

Inform potential students, e.g. high school students, university transfer students, about benefits of nursing as a career choice and the baccalaureate entry to practice position.

Increase recruitment activities of baccalaureate programs.

Regularly provide information to practising nurses about accessibility of post-R.N. baccalaureate programs.

Program implementation and evaluation

Although social marketing plans often are not developed with a program evaluation component, Kotler (1984) recommends that it be provided for as part of the planning process. Further, he recommends that the success of a social marketing campaign be evaluated according to the following five attributes: high incidence of adoption; high speed of adoption; high continuance of adoption; low cost per unit of successful adoption; and, major counterproductive consequences. In this situation, a rapidly increasing proportion of baccalaureate-prepared nurses, the discontinuation of diploma programs and the achievement of the objectives by the year 2000 would indicate success.

Ideally, the overall cost of converting to an all-baccalaureate prelicensure education system would be balanced by greater productivity of baccalaureate-prepared nurses and cost saving health care delivery provided by baccalaureate nurses. Overall costs should not be greater than maintaining the present mix of diploma plus baccalaureate programing, although it may not actually be less.

Conclusion

While application of social marketing techniques cannot guarantee implementation of baccalaureate entry to practice by the year 2000, it does provide a useful framework for addressing this public policy issue. There is much more to marketing than simply communication or promotion. Nursing could benefit from exploring how best to adapt social marketing techniques for the purpose of implementing baccalaureate entry to practice. As noted by Ruderman (1986), "The advantage of the marketing approach lies in the fact that national target setting and problem identification, together with the knowledge of the target population (or market segment), provided by market research, avoids the waste of misdirected promotional effort" (p. 316). Given the significance and the complexity of requiring a baccalaureate degree in nursing as the minimum education for entry to practice, there is no room either for waste or misdirection of promotional efforts to achieve this goal for Canadian nursing.

REFERENCES

Alberta Association of Registered Nurses. (1985). *Educational preparation for professional nursing in the year 2000: An action plan for 1985-2000*. Edmonton: Author.

Alberta Association of Registered Nurses. (1987a). Update U.N.A. resolution. *AARN Newsletter*, 43(11), 2.

Alberta Association of Registered Nurses. (1987b). *Entry to practice 2000: An action plan for 1987-2000*. Edmonton: Author.

Alberta Association of Registered Nurses. (1987c). *Entry to practice 2000: Impact on diploma prepared nurses: An action plan for 1987-2000*. Edmonton: Author.

Brehony, K., Frederiksen, L. & Solomon, L. (1984). Marketing principles & behavioral medicine: An overview. In L. Frederiksen, L. Solomon & K. Brehony (Eds.), *Marketing health behavior: Principles, techniques and applications* (pp. 3-22). New York: Plenum Press.

Brown, B. (1985). From the editor. *Nursing Administration Quarterly*, 10(1), iv-v.

Canadian Nurses Association. (1988). C.N.A. connection. *The Canadian Nurse*, 84(1), 9, 42.

Eliopoulos, C. (1985). Selling a positive image builds demand. *Nursing Management*, 16(4), 23-26.

Fine, S. (1981). *The marketing of ideas and social issues*. New York: Praeger.

Government of Alberta. (1977). *Position paper on nursing education: Principles and issues*. Edmonton: Author.

Government of Alberta. (1987). *B.Sc.N. as minimum entry to nursing practice*. (Available from A. Graham, Director, Public Communications, Alberta Hospitals and Medical Care, Edmonton.)

Government of Ontario. (1983, November 30). *Government of Ontario position regarding entry to practice as a registered nurse in Ontario*. Toronto: Author.

Kotler, P. (1975). *Marketing for non-profit organizations*. Englewood Cliffs, NJ: Prentice-Hall.

Kotler, P. (1982). *Marketing for non-profit organizations* (2nd ed.). Englewood Cliffs, NJ: Prentice-Hall.

Kotler, P. (1984). Social marketing of health behavior. In L. Frederiksen, L. Solomon & K. Brehony (Eds.), *Marketing health behavior: Principles, techniques, and applications* (pp. 23-39). New York: Plenum Press.

Kotler, P. & Levy, S. (1978). Broadening the concept of marketing. In P. J. Montana (Ed.), *Marketing in non-profit organizations* (pp. 3-15). New York: AMACOM.

Lovelock, C. & Weinberg, C. (1984). *Marketing for public and non-profit managers*. New York: John Wiley & Sons.

Lynn, G. (1987, September 23). *Results of entry to practice ballot*. (Available from Ontario Nurses' Association, #600-85 Grenville Street, Toronto, Ontario)

MacStravic, R. E. (1978). Should hospitals market? In P. J. Montana (ed.), *Marketing in non-profit organizations* (pp. 251-258). New York: AMACOM.

Montana, P. J. (1978). Introduction. In P. J. Montana (Ed.), *Marketing in non-profit organizations* (pp. ix - xiii). New York: AMACOM.

Murphy, P. E. (1984). Analyzing markets. In L. Frederiksen, L. Solomon & K. Brehony (Eds.), *Marketing health behavior: Principles, techniques and applications* (pp. 41-58). New York: Plenum Press.

National Federation of Nurses Unions. (1987). By the year 2000: Better prepared? Or better educated? *Information*, 4(3), 1, 3.

Norkett, H. B. (1985). The role of nursing in marketing health care. *Nursing Administration Quarterly*, 10(1), 85-89.

Nurses Association of New Brunswick. (1987a). Association releases investigation results to public. *Info*, 18(5), 1-2.

Nurses Association of New Brunswick. (1987b, August 31). *Special Committee on Entry to Practice - Terms of Reference*. (Available from Nurses Association of New Brunswick, 231 Saunders Street, Fredericton, New Brunswick)

Ontario Nurses Association. (1987, June). New Brunswick R.N.s first to say no to B.Sc.N. entry. *O.N.A. News*, 14(6), 1.

Registered Nurses Association of Ontario. (1984). Government of Ontario position regarding entry to practice as a registered nurse in Ontario November 30/83. *R.N.A.O. News*, 40(2), 12, 13.

Registered Nurses Association of Ontario. (1986). Sneak preview. *R.N.A.O. News*, 1(1), 12.

Registered Nurses Association of Ontario. (1987). Entry to practice: An overview. *R.N.A.O. News*, 43(6), 29, 32.

Rovers, R. (1987). Committee reports: Entry to practice committee. *R.N.A.N.S. Bulletin*, 19(3), 24.

Ruderman, A. P. (1986). Marketing health promotion in Canada: An idea whose time has come. *Canadian Journal of Public Health*, 77(5), 315-316.

Staff Nurses Associations of Alberta. (1987). Entry to practise. *S.N.A. of Alberta Publication*, 6(3), 2-6.

Statistics Canada. (1986). *Nurses in Canada 1986*. (83-226). Ottawa, On.: Health Manpower Statistics Section, Health Division.

Wagner, P. A. (1978). Marketing for capital HPOs - from a practitioners point of view. In P. J. Montana (Ed.), *Marketing in non-profit organizations* (pp. 38-51). New York: AMACOM.

Walker, D. (1985). Overview of marketing at Stanford University Hospital. *Nursing Administration Quarterly*, 10(1), 18-27.

Wood, M. (1987, October 26). *The University of Alberta Faculty of Nursing Council Dean's Report*. (Available from Faculty of Nursing, University of Alberta, Edmonton, AB.).

This manuscript is adapted from a paper presented June 3, 1986, by Sharon Richardson at the Learned Societies Conference, Canadian Association of University Schools of Nursing, University of Manitoba, Winnipeg, Manitoba.

RÉSUMÉ

La promotion du baccalauréat comme condition d'entrée à l'exercice de la profession infirmière

Une façon de promouvoir le baccalauréat comme condition d'entrée à l'exercice de la profession infirmière au Canada pourrait être l'application des conceptes et techniques de la commercialisation sociale. La commercialisation sociale implique la commercialisation d'une idée ou d'une opinion plutôt que d'un produit concret ou d'un service. Cet article vise à explorer l'application de techniques de commercialisation sociale à la position de l'Association canadienne des infirmiers et infirmières, voulant que d'ici l'an 2000, l'éducation minimale pour l'entrée à l'exercice de la profession devrait être un baccalauréat en sciences infirmières. Le besoin perçu de promotion, ce qui constitue la commercialisation sociale, les contraintes de la commercialisation sociale, la rationalisation de la commercialisation sociale dans le domaine infirmier et la stratégie de promotion du baccalauréat comme condition d'entrée à l'exercice de la profession sont présentés ici. Ont été utilisées les publications liées de façon générale à la commercialisation par des organismes publics ou à but non lucratif et, en particulier, des organismes canadiens du secteur infirmier et médical. Des recommandations sur la stratégie à utiliser pour promouvoir le baccalauréat comme condition d'entrée à l'exercice de la profession sont présentées, recommandations provenant de la politique officielle de syndicats d'infirmiers et infirmières et de gouvernements provinciaux du Canada. Ces recommandations sont dérivées des sept étapes majeures de Kotler (1982) d'une campagne de commercialisation sociale et se concentrent sur le rôle promoteur que pourraient assumer les associations provinciales d'infirmiers et infirmières professionnelles et les facultés de sciences infirmières dans les universités. Des stratégies particulières de promotion à l'usage du niveau provincial sont générées par l'examen des quatre "p" du mixage de commercialisation - produit, prix, place et promotion.

OCCUPATIONAL RISK FACTOR ASSESSMENT FOR COMMUNITY-BASED HEALTH PROFESSIONALS

D. Lynn Skillen

The majority of provinces enacted occupational health and safety legislation in the 1970s. Alberta's Occupational Health and Safety Act of 1976 integrated the province's approach to worker protection; however, although safety regulations are universal, statutory requirements did not regulate health services for workplaces with less than 200 on-site employees. Affected employees are required to approach community-based health care practitioners for the identification, evaluation and management of work-related illness and disease. Assuming that occupational health problems are essentially preventable, health professionals hold key positions for influencing worker health outcomes. Nurses and physicians, however, must provide health surveillance and health care that is based on information elicited from the worker-client and without the advantage of worksite observations. This project evolved from the concern that health professionals, who are functioning outside of the workplace, are approached for health services by worker-clients who have diverse experiences and exposures. It is essential that those professionals have comprehensive information about relevant occupational factors.

Description of the Project

The purpose of this project was to expedite the development of a comprehensive data collection instrument for use by community-based health care practitioners in the individualized assessment of occupational risk factors. The following objectives were stated.

1. To conduct an extensive review of the literature focused on: (a) justification of the need; (b) risk categories; and (c) available instruments.
2. To consult with outside experts and centres of occupational health and safety knowledge regarding essential content for assessing risk factors.
3. To consult with experts in the field of instrument development for assistance with the format and design of assessment questions.

D. Lynn Skillen, B.Sc.N., M.H.Sc., O.H.N.C. is an assistant professor in the Faculty of Nursing at the University of Alberta, in Edmonton.

The Canadian Journal of Nursing Research *1988, 20(2), 49-60*

4. To develop an assessment instrument, which would include a comprehensive history of work exposures and occupations, in order to identify risk factors.

5. To establish content validity of the assessment instrument using a panel of experts in the occupational health and safety field.

Review of the Literature

Justification of the need

The majority of Canadian women and men are in the paid workforce (Statistics Canada, 1988) and are potentially at-risk for work-related illness, disease or injury. Federal and provincial legislation has stipulated approaches to health and safety for Canadian workers (Makdessian, 1987); however, workplaces in Alberta with under 200 on-site employees are without regulated health services.

Many authors recognize that the work-related history is fundamental to an assessment of occupational risk factors by the health professionals who serve as primary care providers (Discher, Kleinman & Foster, 1975; Goldbaum, 1981; Goldman & Peters, 1981; Guidotti et al., 1983; Hainer, 1981; Larsen, Schuman & Hainer, 1983; Rest, Hake & Cordes, 1983). In particular, Guidotti et al. (1983) and Goldman and Peters (1981) have argued articulately in favour of the occupational history. Nonetheless, the review of the literature revealed four types of issues as obstacles to occupational history-taking by community-based practitioners: administrative, occupational, professional and scientific. Administrative issues are principally procedural and instrumental. A history requires time (Gumpel & Mason, 1974),scheduling, an appropriate data collection instrument, follow-up, storage space, available references and mechanisms for consultation (Backett, Davies & Petros-Barvazian, 1984; Becker, 1982; Larsen et al., 1983; Rest et al., 1983; Rom, 1983).

Occupational issues that obstruct history-taking include worker, management and work characteristics. Myths, ignorance, assumptions that the professional knows the obvious exposures to risk, fear of recrimination in the workplace or desire for extra money cause workers to over- or under-report the risks in the workplace thereby complicating data collection (Baumgarten, Siemiatycki & Gibbs, 1983; Coye & Rosenstock, 1983; Goldbaum, 1981; Rest et al., 1983; Shindell & Goldberg, 1981). Data collection is also hindered by the conflict between management's profit motive and the health and safety motive of health professionals. Consequently, risks are downplayed, incentives are offered for hazardous work and recordkeeping of exposures to hazards is neglected (Becker, 1982; Coye & Rosenstock, 1983; Discher et al., 1975; Felton, 1980; Ginnetti & Greig, 1981). Additionally,

data collection is made difficult by the terminology that is used in the work place and the complexity of exposures to hazards at the worksite (Felton, 1980; Larsen et al., 1983; Rosenstock, Logerfu, Heyer & Carter, 1984).

Numerous professional issues were identified for medical personnel: inadequate undergraduate education (Felton, 1980); ignorance of resources and references (Becker, 1982; Coye & Rosenstock, 1983; Rest et al., 1983); time constraints (Guidotti et al., 1983; Hainer, 1981; Pecoraro, Inui, Chen, Plorde & Heller, 1979; Rest et al., 1983); noncompliance with legal requirements for notification of occupational disease (CCOHS, 1984; Discher et al., 1975; Rest et al., 1983); lack of financial remuneration (CCOHS, 1984; Guidotti et al., 1983); and little threat of litigation by clients whose medical diagnosis fails to identify an occupational etiology (Demers & Wall, 1983; CCOHS, 1984; Felton, 1980; Goldbaum, 1981). No equivalent analysis of relevant professional issues for community-based nurses was discovered, although at face value several physician issues could apply to nurses. Furthermore, reports of occupational history-taking by nurses were limited and demonstrated inadequacies. For example, Wilson (1981) describes a Canadian nurse--practitioner's independent practice and focusses on health counselling, without any reference to occupation. Draye and Peznecker (1980) note that family nurse-practitioners in an American ambulatory care setting neglected to include occupational assessments in their activity-coding instrument, and a performance appraisal tool for hospital-based nurse-practitioners contained no reference to occupational history-taking (Levitt et al., 1985). Lindberg (1980) also reports on an historical data base for determining the relevant screening tests for secondary prevention, and it has no occupational component. In contrast, a proposed health surveillance program for use with hospital employees includes documentation of all previous employment and worker-reported hazardous exposures (Van den Eeden & Wilkinson, 1985). Moreover, Ginnetti and Grieg (1981) propose an occupational history form that would include all employment experience plus data on chemical exposures, psychological stressors, selected physical hazards and the personal protective equipment used. Furthermore, when Alleyne and Orford (1984) reviewed hospital admission records in Edmonton, Alberta, they reported that only 43% of the records had notations about occupation and that 81% of those had been made by nurses.

Scientific issues include lack of reliable and valid data collection instruments for use outside of the workplace (Baumgarten & Oseasohn, 1980; Rosenstock et al., 1984), lack of sensitivity and specificity of clinical laboratory tests (Rest et al, 1983), obscured cause-effect relationships because of long latency periods (Barth & Hunt, 1980; Rosenstock et al., 1984), controlled access to toxicological data (SCC, 1986), interviewer effect on validity (Baumgarten et al., 1983; Gerin, Siemiatycki, Kemper & Begin, 1985), inaccuracies because of extrapolations from animal studies to

humans (Somers, 1979), gender-based differences (Hunt, 1979; NIOSH, 1986; Pell, 1978; Stellman, 1977; Zielhuis, Stijkel, Verberk & van de Poel-Bot, 1984), and the existence of many non-occupational causes for observations made clinically (Rest et al., 1983).

In summary, the barriers to occupational history-taking were considered numerous but not insurmountable. Administrative, occupational, professional and scientific issues were taken into consideration during instrument development.

Categories of risk

In the workplace, comprehensive assessments are generally performed using the industrial hygiene framework (Olishifski, 1979; Ott, 1977). The mandate of salaried or consultant industrial hygienists is to recognize, evaluate and control health hazards that are categorized as biological, chemical, ergonomic or physical (Olishifski, 1979). The literature search identified no exhaustive use of those categories in the community by nurses and physicians, although one or more of the categories was always present in histories. Additionally, psychosocial hazards, home and community exposures to risk, untoward reproductive outcomes, unemployed periods and risks to safety were used frequently, but not consistently, across the instruments in the literature (Felton, 1980; Gerin et al., 1985; Ginnetti & Grieg, 1981; Guidotti et al., 1983; Pannet, Coggon & Acheson, 1985; Rom, 1983; Sandy Hill Health Centre, 1984; Shindell & Goldberg, 1981; Smith, 1986).

Availability of instruments

Many instruments are available for occupational history-taking (Becker, 1982; Coye & Rosenstock, 1983; Ginnetti & Greig, 1981; Goldman & Peters, 1981; Guidotti et al., 1983; Mattila, 1985; Sandy Hill Health Centre, 1984). No one instrument was discovered, however, which incorporated all of the industrial hygiene categories, psychosocial hazards, home and community exposures, reproductive outcomes, safety risks and periods of unemployment for use by the community-based practitioner.

Consultation

Following approval of the application for funding and before the draft instrument was sent to the review panel, the Canadian Centre for Occupational Health and Safety was consulted, with regard to data bases and available instruments. Throughout the term of the research project and during the preparation of the final report, the design and content experts were consulted on a regular basis, in accordance with the research activity. Design issues involved item development and modification, review procedure, review form

development and instrument readability level. Content issues included comprehensiveness and depth and format of items, all of which were discussed at three stages: before completion of the draft; after a preliminary review; and subsequent to the review by the expert panel.

Instrument Development

Two principal issues for instrument development emerged from the review of the literature. Not only was content of major importance, but the administrative, occupational, professional and scientific issues had consequences for format. The decision was made to develop an instrument with two sections: *Section One* was a worker self-administered screening questionnaire, and *Section Two* provided guidelines for a nurse or physician to direct precise questions to relevant items in the completed questionnaire. The instrument contained the four categories of exposure to risk used by industrial hygienists, plus psychosocial hazards, exposures that occur in the home and community, any reproductive outcomes noted, any observed risks to safety in the workplace and documentation of current and previous work history or unemployment. An attempt was made to maintain the readability level of *Section One* at a Grade Eight equivalent, using the SMOG formula (McLaughlin, 1969). Field workers have since suggested that it might be beneficial to strive for a Grade Six level. Before the instrument was considered ready for the review panel, two academic and two non-academic staff members, one graduate research assistant, and one non-university-affiliated worker reviewed the questionnaire. In response to their suggestions about item order and readability level, the instrument was revised and submitted to the review panel of occupational health professionals.

Content validity

A review form was developed for the members of the expert panel. Figure 1 is a reproduction of the first page of the review form.

In order to avoid noncommittal responses, the four point "relevance" scale suggested by Lynn (1986) was used. All reviewers were asked to rate their response to three questions using a four point scale of: (1) "not relevant"; (2) "needs major revisions"; (3) "relevant with minor alterations"; and, (4) very relevant and succinct". The questions were:

1. Does each item or question identify occupational risk factors?
2. Does the instrument contain the categories of occupational risk?
3. Does the instrument adequately represent occupational risk factors for screening purposes?

REVIEW FORM

Occupational Risk Factor Assessment Instrument
Section One: Questionnaire
Section Two: Additional Questions

Instructions:

1. Please circle the number which corresponds to your rating of the question in each section.
2. For questions rated "3" or "2" your suggestion for replacement wording would be appreciated.
3. Please keep in mind the users of the questionnaire and the additional questions.

Question #1. does each item or question identify occupational risk factors?

SECTION ONE

Work Exposures
Chemical Factors

		Not Relevant	Needs Major Revisions	Relevant with Minor Alterations	Very Relevant and Succinct
Question	1.	1	2	3	4
	2.	1	2	3	4
	3.	1	2	3	4
	4.	1	2	3	4
	5.	1	2	3	4
	6.	1	2	3	4
	7.	1	2	3	4

Suggested Replacement Wording?

Physical Factors

Question	1.	1	2	3	4
	2.	1	2	3	4
	3.	1	2	3	4

Figure 1
First page of the Review Form

Reviewers had only to circle the number to indicate the position of the item on the four point scale. Replacement wording was solicited, and space provided for any items which were rated a "2" or "3".

Fourteen industrial hygienists, occupational health nurses and occupational health physicians agreed to participate on a review panel. A second explanatory letter accompanied the package of materials for the review process. The package included a review form, the instrument and a self-addressed stamped envelope for return within a four-week limit. A total of ten professionals, i.e., two industrial hygienists, six occupational health nurses and two

occupational health physicians were able to complete the review before the deadline. Items that had at least 80% agreement on category (4) "very relevant and succinct" or (3) "relevant with minor alterations" were revised as necessary and retained. Changes of substance were reviewed with the content consultant. Suggested editorial changes were made when judged necessary. On the basis of the scale responses for each item under Question #1 and for Questions #2 and #3, the instrument was considered to have content validity. The final version of the instrument includes a screening questionnaire for self-administration by workers (to be completed in approximately 30 minutes) and a guideline for follow-up questioning by health professionals. Figure 2 contains a sample page of the questionnaire, and Figure 3 presents the guideline.

Ergonomic Factors

1. Do you have to use uncomfortable or repetitive movements at work? (e.g. bending, twisting, lifting, standing). If "Yes", please describe: No ____ Yes ____

2. Is the equipment or machinery used at work comfortable or adjustable to your needs, e.g. height, eyesight, handgrip? No ____ Yes ____

3. At the end of your worktime, does any part of your body hurt or ache? If "Yes", please describe: No ____ Yes ____

4. Do you have pain or discomfort in your back? No ____ Yes ____
Have you been under the care of a doctor/chiropractor/physiotherapist for back problems? No ____ Yes ____
If "Yes", please describe:

Biological Factors

Please check ( ) as many as apply:

1. Which of the following are available at work?
- Clean Water _____
- Handwashing Facilities _____
- Washroom Facilities _____
- Shower Facilities _____
- Separate Room for Meals and Breaks _____
- Separate Change Area or Locker Rooms _____

2. Have you or any fellow workers had infections related to your work? If "Yes", please describe: No ____ Yes ____

3. Do you handle live or dead animals or birds? No ____ Yes ____

4. Do you handle animal or human wastes? No ____ Yes ____

Figure 2

Sample page of the Occupational Risk Factor Assessment Instrument.

INSTRUCTIONS:

These additional questions are to be addressed and phrased as necessary by health professionals in order to elicit more information when reviewing the questionnaire with clients/patients.

1. Is there a temporal relationship of symptoms with work? i.e., are symptoms better or worse after leaving work, on time off, on vacation?
2. Are co-workers complaining of similar symptoms?
3. Is there anything out of the ordinary happening at work?
4. If personal protective equipment is used, does it fit properly? or did the client ever make changes to it to make it feel better? Was client shown how to use it properly and the rationale for it?
5. How often are hands washed by client at work? Is the client a nailbiter? Does the client have a beard, mustache or long hair? Does the client smoke at work?
6. Have all the possible routes of entry been considered (inhalation, skin absorption, ingestion, injection)?
7. Has there been any exposure to spills? Any equipment leaks or malfunction? Poor work practices by co-workers?
8. If animals or birds are near the workplace, has there been any change in their appearance or behavior?
9. Where are hobbies carried out at home? Is ventilation appropriate?
10. Where are work clothes washed for the client and all other adults in the home?
11. Is there stress related to workload, workplace, job demands, inadequate coping mechanisms, solitary work?

Figure 3
Guideline for health professional follow-up questioning.

The instrument's purpose is to screen for occupational and environmental exposures. It is to be used by community-based health professionals who have little knowledge of the workplace.

Future research

A research funding proposal is now being developed for more extensive reliability and validity testing of the occupational risk factor assessment instrument. Following that research, the instrument's effectiveness will be tested in community-based health care facilities. The instrument has been translated into Spanish, the author's second language, and will undergo separate reliability and validity testing with Spanish-speaking populations before being tested clinically.

Summary

A screening data collection instrument was developed for self-administration by worker-clients and for follow-up questioning by the

community-based nurses or physicians whom they approach for health care. An attempt was made to maintain a readability level at a Grade Eight equivalent. Content validity was established using an expert panel of ten professionals, which was composed of occupational health nurses, industrial hygienists and occupational health physicians. Reviewers rated all items on a four-point relevance scale in response to the three research questions. No item received less than 80% agreement by reviewers. The instrument was translated into Spanish, the author's second language. The second phase of the research will test the reliability and validity of both versions more extensively and the third phase will test the effectiveness of the instruments in diverse community-based health care facilities.

REFERENCES

Alleyne, B. & Orford, R. (1984). Employment history valued, but not recorded by MDs. *Canadian Medical Association Journal*, 31, 1014.

Backett, E. M., Davies, A. M. & Petros-Barvazian, A. (1984). *The risk approach in health care*. Geneva: World Health Organization.

Barth, P. S. & Hunt, H. A. (1980). *Workers' compensation and work-related illnesses and diseases*. Cambridge, Mass.: The MIT Press.

Baumgarten, M. & Oseasohn, R. (1980). Studies on occupational health: A critique. *Journal of Occupational Medicine*, 22(3), 171-176.

Baumgarten, M., Siemiatycki, J. & Gibbs, G. W. (1983). Validity of work histories obtained by interview for epidemiologic purposes. *American Journal of Epidemiology*, 118(4), 583-591.

Becker, C. E. (1982). Key elements of the occupational history for the general physician. *Western Journal of Medicine*, 137(2), 581-582.

Canadian Centre for Occupational Health and Safety. (1984). *Notification and surveillance of occupational diseases in Canada and other countries*. Hamilton: CCOHS.

Coye, M. J. & Rosenstock, L. (1983). The occupational health history in a family practice setting. *American Family Physician*, 28(5), 229-234.

Demers, R. & Wall, S. J. (1983). Occupational history-taking in a family practice academic setting. *Journal of Medical Education*, 58(3), 151-153.

Discher, D. P., Kleinman, G. D. & Foster, F. J. (1975). *Pilot study for development of an occupational disease surveillance method*. Rockville, Md.: NIOSH.

Draye, M.A. & Preznecker, B. (1980). Teaching activities of family nurse-practitioners. *Nurse-Practitioner*, 5(5), 28-33; 62.

Felton, J. S. (1980). The occupational history: A neglected area in the clinical history. *Journal of Family Practice*, 11(1), 33-39.

Gerin, M., Siemiatycki, J., Kemper, H. & Begin, D. (1985). Obtaining occupational exposure histories in epidemiologic case-control studies. *Journal of Occupational Medicine*, 27(6), 420-426.

Ginnetti, J. & Greig, A. E. (1981). The occupational health history. *Nurse-Practitioner*, 6(11), 12-13.

Goldbaum, R. (1981). Occupational disease: The patient as worker. *Nurse-Practitioner*, 6(6), 8-11.

Goldman, R.H. & Peters, J.M. (1981). The occupational and environmental health history. *Journal of the American Medical Association*, 246(24), 2831-2836.

Guidotti, T. L., Cortez, J. H., Abraham, H. L., Hughson, W., Krems, A. D., Neuman, T. S., Bryson, A. L. & Heramb, B. I. (1983). Taking the occupational history. *Annals of Internal Medicine*, 99(5), 641-651.

Gumpel, J. M. & Mason, A. M. S. (1974). Self-administered clinical questionnaire for out-patients. *British Medical Journal*, 2, 209-212.

Hainer, B. L. (1981). Family medicine and job related illness. *Journal of Family Practice*, 12(3), 575-576.

Hunt, V.R. (1979). *Work and the health of women*. Boca Raton, Florida: CRC Press, Inc.

Larsen, M. E., Schuman, S. H. & Hainer, B. L. (1983). Workplace observation: Key to a meaningful office history. *Journal of Family Practice*, 16(6), 1179-1184.

Levitt, M.C., Stern, N.B., Becker, K.L., Zaiken, H., Hangasky, S. & Wilcox, P.H. (1985). A performance appraisal tool for nurse-practitioners. *Nurse-Practitioner*, 10(8), 28-33.

Lindberg, S.C. (1980). Periodic preventive health screening schedule for adult men and women. *Nurse-Practitioner*, 5(5), 9-13.

Lynn, M.R. (1986). Determination and quantification of content validity. *Nursing Research*, 35(6), 382-385.

Makdessian, F. (Ed.). (1987). *Occupational health and safety management handbook*. Don Mills, Ontario: Corpus Information Services.

Mattila, M. K. (1985). Job load and hazard analysis: A method for the analysis of workplace conditions for occupational health care. *British Journal of Industrial Medicine*, 42, 656-666.

McLaughlin, G.H. (1969). SMOG-grading: a new readability formula. *Journal of Reading*, 22, 639-646.

National Institute for Occupational Safety and Health (1986). *Draft: A proposed national strategy for the prevention of work-related disorders for reproduction*. Washington: NIOSH.

Olishifski, J.B. (Ed.). (1979). *Fundamentals of industrial hygiene*. Chicago: National Safety Council.

Ott, M. G. (1977). Linking industrial hygiene and health records. *Journal of Occupational Medicine*, 19(6), 388-390.

Pannet, B., Coggon, D. & Acheson, E. (1985). A job-exposure matrix for use in population based studies in England and Wales. *British Journal of Industrial Medicine*, 42(11), 777-783.

Pecoraro, R.E., Inui, T.S., Chen, M.S., Plorde, D.K. & Heller, J.L. (1979). Validity and reliability of a self-administered health history questionnaire. *Public Health Reports*, 94(3), 231-238.

Pell, S. (1978). Epidemiological requirements for medical-environmental data management. *Journal of Occupational Medicine*, 20(8), 554-556.

Rest, K. M., Hake, J. C. & Cordes, D. H. (1983). *The occupational and environmental history*. Tucson, Arizona: University of Arizona.

Rom, W. N. (Ed.) (1983). *Environmental and occupational medicine*. Boston: Little, Brown and Company.

Rosenstock, L., Logerfu, J., Heyer, N. J. & Carter, W. B. (1984). Development and validation of a self-administered occupational health history questionnaire. *Journal of Occupational Medicine*, 26(1), 50-54.

Sandy Hill Health Centre (1984). *Environmental/occupational history form*. Ottawa: Sandy Hill Health Centre.

Science Council of Canada (1986). *A national workshop on the role of epidemiology in the risk assessment process in Canada*. Ottawa: Author.

Shindell, S. & Goldberg, H. M. (1981). Surveillance systems: What to include and why. *Occupational Health and Safety*, 50(7), 34-39; 56.

Smith, K. G. (1986). The hazards of migrant farm work: An overview for rural public health nurses. *Public Health Nursing*, 3(1), 48-56.

Somers, E. (1979). Risk assessment for environmental health. *Canadian Journal of Public Health*, 70(6), 388-392.

Statistics Canada. (1988). *Historical labour force statistics: Actual data, seasonal factors, seasonally adjusted data, 1987*. Ottawa: Minister of Supply and Services Canada.

Stellman, J. M. (1977). *Women's work, women's health: Myths and realities*. New York: Random House Inc.

Van den Eeden, S.K. & Wilkinson, W.E. (1985). Health screening for hospital personnel exposed to waste anesthetic gases. *Occupational Health Nursing*, 33(2), 63-75.

Wilson, J.B. (1981). CNJ talks to Shirley Wheatley, independent nurse-practitioner. *The Canadian Nurse*, 77(6), 43-45.

Zielhuis, R. L., Stijkel, A., Verberk, M.M. & van de Poel-Bot, M. (1984). *Health risks to female workers in occupational exposure to chemical agents*. New York: Springer-Verlag.

ACKNOWLEDGEMENTS

This project was supported by a Facilitation Grant from the Alberta Foundation for Nursing Research.

This paper is an extension of the ideas presented at the University of Western Ontario Research Day, May, 1988.

RÉSUMÉ

Evaluation de l'élement de risque occupationnel pour les professionnels de la santé en milieu communautaire

Les services de santé au travail, offerts dans tous les divers lieux de travail, ne sont pas régis par des exigences statutaires, quoique des stipulations aient été établies en ce qui a trait à la sécurité. Les infirmirères practiciennes et autres travailleurs de la santé qui oeuvrent dans la communauté à des problèmes reliés à l'occupation du travailleur/client qui les consulte; et ce sans connaître les risques auxquels il est exposé, ou sans avoir une évaluation des dangers encourus dans son milieu de travail. Un instrument de dépistage a été développé pour auto-administration par le travailleur/client, et pour un suivi par le professionel de la santé consulté. L'instrument a été construit en tenant de le maintenir à un niveau tel, qu'un individu possédant huit ans de scolarité peut le compléter. La validité de contenu été établie à l'aide d'un groupe d'experts de dix professionels composé d'infirmières et de médecins en santé au travail, et d'hygiénistes industriels. Chaque membre du comité de révision a évalué tous les items sur une échelle de pertinence de quatre points. Trois questions étaient répondues, pour chaque item, concernant la capacité d'identifier les facteurs de risque, la valeur pour but de dépistage, et la représentation des catégoires de risque. basé sur les réponses des membres du comité, le contenu de l'instrument a été condidéré valide. Le deuxième phase de la recherche s'étendra sur un périod de deux ans et inclura une évaluation plus étendue de la fidélité et de la validité des deux versions de l'instrument (anglaise et espagnole). La triosième phase se penchera sur l'efficacité de l'instrument dans divers établissements de santé communautaire.

RELIABILITY AND VALIDITY: MISNOMERS FOR QUALITATIVE RESEARCH

Olive Yonge and Len Stewin

Validity and reliability, as indices of measurement, have been well developed in and for quantitative methods. Validity has been classified and defined in the following ways: face, content, predictive, concurrent, construct, internal and external. Reliability has been classified and defined as quixotic, diachronic, synchronic, external and internal (Duffy, 1985; Kirk & Miller, 1986; Knapp, 1985; Le Compte & Goetz, 1982). Essentially the terms validity and reliability refer to accuracy, consistency and equivalence in research that is designed for quantification in the natural sciences. Many tests have been and continue to be developed to prove validity and reliability. Not all quantitative researchers agree however, that the terms are used accurately. For example, Knapp (1985) in his article "Validity, reliability and neither" notes errors that are commonly made: describing internal consistency as a distinct and different property, when in fact it is an aspect of reliability; or, the citing of a correlation between parallel forms as evidence for validity. Knapp illustrates how some researchers incorrectly use these measures and he raises a second issue - that knowledge about reliability and validity is continuing to evolve.

The thesis of this paper is that the terms validity and reliability should not be applied to qualitative research methods. When Le Compte and Goetz (1982) wrote their, seminal article on how qualitative research has adhered to the canons of reliability and validity, what was their intent? They acknowledged that reliability is difficult to measure in qualitative research because of the nature of the narrative data and the involvement of the researcher in a change process; yet, they proceeded to force qualitative methods to fit criteria for external and internal reliability. Other qualitative researchers such as Goodwin and Goodwin (1984), Duffy (1985), Swanson-Laufman (1986), and Atwood and Hinds (1986) have followed suit, describing how their research addresses these measures.

Olive Yonge, R.N., M.Ed. is Associate Professor in the Faculty of Nursing at the University of Alberta. Len Stewin, Ph.D. is Professor in the Faculty of Educational Psychology at the University of Alberta, in Edmonton.

The Canadian Journal of Nursing Research *1988, 20(2), 61-67*

There are different historical origins for quantitative and qualitative enquiry, different interpretations of the words "meaning" and "truth" and different emphases on methods of data collection. As such, it is difficult to understand why terms associated with measurement theory would be used to describe research that is embedded in rather than removed from context and is a "systematic study of the world of every-day experience" (Swanson & Chenitz, 1982, p.243). For example, because the data analysis and collection stage proceed simultaneously when using grounded theory, at what point should the terms be applied? As well, how could a panel of experts validate data when they were not part of the social situation that generated them (Stern, Allen & Moxley, 1984)? One could speculate that the terms have been applied for the following reasons: thoughtlessly; to convince quantitative researchers about the rigour of qualitative methods; to fill a void, as a way of describing credibility; or, thoughtfully, because no essential differences between the two methods are identified. It is a belief of the authors that there is an essential difference between the two methods of enquiry, and that the question of rigour in qualitative methods can be addressed in ways other than the traditional validity and reliability measures referred to in quantitative research.

Essential Differences

Research is a personal and social process (Allender, 1986). Over time, this subjective process mirrors and responds to political and social pressures. Reality no longer is static but is dependent on the context and perceptions of the actor, each having his own reality. This view of reality is part of a new paradigm that conflicts with the established positivistic, reductionist, deterministic paradigm that is concerned with quantification. This new paradigm acknowledges that, as researchers, "we interact with and are an integral part of what we study" (Allender, p. 185); this places a tremendous onus on the researcher to be responsible and ethical.

Smith and Heshusius (1986), using different descriptors, outline ways in which qualitative approaches arose as a reaction against positivism. Citing the observations of Dilthey that there is a fundamental difference in subject matter between the natural and social sciences, they observe that other researchers have ignored this division. In fact they accuse certain qualitative researchers of using a "variation in technique" in a quantitative framework. Miles and Huberman (1984), criticized by Smith and Heshusius, dismiss the implications of noting such fundamental differences with a statement favouring pragmatism: "Epistemological purity doesn't get research done" (p. 21). In psychological terms, Miles and Huberman compromise: they recognize that an essential difference exists but fail to address it. Other researchers have also taken this stand as evidenced by their advocation of certain types of triangulation (Goodwin & Goodwin, 1984; Mitchell, 1986; Swanson-

Laufman, 1986). Triangulation combines multiple sources of data, investigators, hypotheses or several different methods. If triangulation comprises qualitative and quantitative methods in one study, they would have to be used disjunctively and not conjunctively to maintain epistemological purism (Howe, 1985).

It is of interest that certain qualitative researchers do not acknowledge the essential differences (Le Compte & Goetz, 1982), or do acknowledge them and do not act on them (Miles & Huberman, 1984). Smith and Heshusius (1986), in contrast, stay close to the historical, philosophical thought that helped spawn qualitative methods. The debate as to who is right or wrong is not simple. If one believes in the "mind involvement of a constituted reality" (Smith, 1983, p. 9), then "truth" would be viewed as agreement among people in any given time and space; "objectivity" would be social agreement with values and facts integrated into the research process. The very act of believing in the philosophical tenets of idealism should make it impossible to engage simultaneously in research based in positivism; yet, what has historically been known as truth may not be the same truth as is currently understood. Dismissing Smith and Heshusius's position and getting on with it, as Miles and Huberman advocate is not sufficient; reasons for these differences must be ascertained. Have the perceptions of truth, reality and meaning changed? Is rigid adherence to philosophical thought advisable or even possible? The differences do exist and there is presently a research trend toward "epistemological ecumenism" (Miles & Huberman, p. 20). This is concretely expressed when terms such as validity and reliability are applied to qualitative methods.

Rigour in Qualitative Methods

One of the most pressing problems in qualitative research is to develop enquiry criteria and procedures that will sanction it as a viable research process with a common language structure, clearly defined purposes, methods and analyses. In short, to find criteria and procedures for qualitative methods unlike, but as strong as, those used by quantitative researchers, (i.e., measurement theory, sampling rules and statistical analysis).

Compounding the problem is the great diversity of methods and procedures loosely associated with qualitative enquiry that stems from a number of disciplines, each with its own rules and goals. For example, ethnography, symbolic interactionism and grounded theory were each primarily developed in different fields (Bodgan & Bilken, 1982). Phenomenology, also grouped under qualitative enquiry, began with the work of Kant when, at the end of the eighteenth century, he described man as "knowing". Difficulties arise when researchers cross disciplines and force their view of the world on others rather than working collaboratively for a common purpose. At the

same time, researchers open to other "ways of knowing" have developed very creative, commendable methods of qualitative enquiry that have proven to be meaningful to other researchers and society at large (Glaser & Strauss, 1960; Rogers, 1985).

Assessment framework

Sandelowski (1986) acknowledges these problems and describes a broad framework (referring to the work of Guba and Lincoln) to assess rigour. The four criteria in the framework are: credibility, fittingness, auditability and confirmability.

Credibility occurs when the people (participants) involved in the research read descriptions and immediately recognize the lived experiences to be their own; the description may be of another participant, but it is believed it could be that of the reader himself. As well, credibility is increased when the researchers describe their relationships with the participants: behaviours, impressions and experiences. The relationship need not be positive to be informative, as was the case with the records of Malinowski; Kirk and Miller (1986) observed that if Malinowski's personal diary is to be believed he was a very neurotic and bitchy man.

Fittingness means that the "finding can 'fit' into contexts outside the study situation" (Kirk and Miller, 1986, p. 32). The researcher should consider how the sampling was done, and obtain data that are as representative as possible for the experience under investigation. Fittingness would also refer to whether the results were seen as meaningful to participants not involved in the study.

Auditability refers to the ability of another researcher to follow the thinking, decisions and methods used by the original researcher. The second researcher would arrive at similar results, but not contradictory conclusions. For auditability to occur, the original researcher should painstakingly document the entire research process through the use of memos, diaries or field notes, mechanical recordings, minutes of meetings, letters, etc. A classic example of how auditability was achieved but rendered ineffective occurred when Mead and Freeman studied adolescent sexual behaviour in Samoan society. Mead reported that virginity was nominally important whereas Freeman said virginity was extremely important (Kirk & Miller, 1986). The difference in the findings was not attributed to the methods of data collection but to the gender differences of the researchers: young Samoan females were more revealing to a female researcher than to a male researcher.

Confirmability is a criterion for neutrality; it is achieved when credibility, auditability and fittingness are established. Again, if the participants and

others observe that the findings are meaningful to their lived experiences, confirmability is achieved. Glaser and Strauss (1966) indirectly address confirmability when they observe that qualitative analysis is often the end product of research because the unknown becomes vividly known, saturation of knowledge frequently shifts interest to another phenomena and laymen profit from the findings.

The important questions are not how reliable and valid are the methods and results of a study, but how credible, fitting, auditable and confirmable overall are the findings? Similar terms have been used by Strauss and Glaser (1966) and May (1985) in direct reference to grounded theory. In qualitative research, the researcher is fully dependent on the participant's evaluation of the findings; subjectivity is recognized and accepted as part of the research process. The lived experience of the participant is real.

Challenges for Qualitative Researchers

(1) Develop and use rules, terms and procedures to describe the qualitative research process accurately.

(2) Ensure that participants are actively involved in all phases of the research project, including being present at dissemination of the findings through presentations and are informed of publications.

(3) Understand the purposes and implications of using terms such as validity and reliability.

(4) Tolerate uncertainty and confusion (particularly when pitted against an articulate positivist!) as a new language to describe the relevance of qualitative enquiry emerges.

(5) Recall that there is an essential difference between qualitative and quantitative methods of enquiry and that if both are to be mixed, the researcher must provide a sound rationale.

REFERENCES

Allender, J.S. (1986). Educational research: A personal and social process. *Review of Educational Research,* 56(2), 173-193.

Atwood, J.B., & Hinds, P. (1986). Heuristic heresay: Application of reliability and validity criteria to products of grounded theory. *Western Journal of Nursing Research,* 8(2), 135-154.

Bogdan, R.C., & Bilken, S.K. (1982). *Qualitative research for education: An introduction to theory and methods*. Boston: Allyn and Bacon, Inc.

Duffy, M. (1985). Designing nursing research: The qualitative-quantitative debate. *Journal of Advanced Nursing,* 10(3), 225-232.

Glaser, B.G., & Strauss, A.L. (1966). The purpose and credibility of qualitative research. *Nursing Research,* 15(1), 56-61.

Goodwin, L.D., & Goodwin, W.L. (1984). Qualitative vs quantitative research or qualitative and quantitative research? *Nursing Research,* 33(6), 378-380.

Howe, K. (1985). Two dogmas of educational research. *Educational Researcher,* 14, 10-18.

Kirk, J., & Miller, M.L. (1986). *Reliability and validity in qualitative research.* London: Sage Publications.

Knapp, T.R. (1985). Validity, reliability and neither. *Nursing Research,* 34(3), 189-192.

Le Compte, M.D., & Goetz, J.P. (1982). Problems of reliability and validity in ethnographic research. *Review of Education Research,* 52(1), 31-60.

Leininger, M.M. Ed. (1985). *Qualitative research methods in nursing.* Toronto: Grune and Stratton, Inc.

May, K.A. (1986). Writing and evaluating the grounded theory research report. In Chenitz, W.C. and Swanson, J.M. (1986). *From practice to grounded theory.* Don Mills: Addison-Wesley Pub. Co.

Miles, M.B., & Huberman, A.M., (1984). Drawing valid meaning from qualitative data: toward a shared craft. *Educational Researcher,* 13(5), 20-28.

Mitchell, E.S. (1986). Multiple triangulation: A methodology for nursing science. *Advances in Nursing Science,* 8(3), 18-26.

Rodgers, C. (1985). Toward a more human science of the person. *Journal of Humanistic Psychology,* 25(4), 7-24.

Sandelowski, M. (1986). The problem of rigour in qualitative research. *Advances in Nursing Science,* 8(3), 27-37.

Smith, J.K. (1983). Quantitative versus qualitative research: An attempt to clarify the issue. *Educational Researcher,* 12(3), 6-13.

Smith, J.K., & Heshusius, L. (1986). Closing down the conversation: The end of the quantitative-qualitative debate among educational inquires. *Educational Researcher,* 15(1), 4-12.

Swanson-Laufmann, K.M. (1986). A combined qualitative methodology for nursing research. *Advances in Nursing Science,* 8(3), 58-69.

Swanson, J.M., & Chenitz, W.C. (1982). Why qualitative research in nursing? *Nursing Outlook,* 30(4), 241-245.

Stern, P.N., Allen, L.M., & Moxley, P.A. (1984). Qualitative research: The nurse as grounded theorist. *Health Care for Women International,* 5-6(5), 371-385.

Support of this article came from an Alberta Foundation of Nursing Traineeship in the form of release time to study research methods.

RÉSUMÉ

Fiabilité et Validité:
Termes mal appropriés à la recherche qualitative

Dans ce papier, on demande pourquoi les règles qui gèrent la fiabilité et la validité ne pourraient être appliquées à l'enquête qualitative? Nous discuterons de deux questions fondamentales: (a) les différences essentielles qui existent entre la recherche qualitative et la recherche quantitative, et (b) la rigueur obtenue par la voie d'autres critères, tels que: crédibilité, aptitude, auditabilité et confirmabilité. Le défi, pour les chercheurs en sciences infirmières, consiste à développer des termes, règles et procédés propres à la recherche qualitative, plutôt que de superposer des règles et termes quantitatifs aux méthodes qualitatives.

INFORMATION FOR AUTHORS

The Canadian Journal of Nursing Research welcomes research and scholarly manuscripts of relevance to nursing and health care. Please send manuscripts to The Editor, *The Canadian Journal of Nursing Research*, School of Nursing, McGill University, 3506 University Street, Montreal, QC, H3A 2A7, Canada.

Procedure: Please submit three double-spaced copies of the manuscript on 216mm x 279mm paper, using generous margins. Include a covering letter giving the name, address, present affiliation of the author(s). It is understood that articles submitted for consideration have not been simultaneously submitted to any other publication. Please include with your article a statement of ownership and assignment of copyright in the form as follows: "I hereby declare that I am the sole proprietor of all rights to my original article entitled ' ' and that I assign all rights to copyright to the School of Nursing, McGill University, for publication in *The Canadian Journal of Nursing Research/La revue canadienne de recherche en sciences infirmières*. Date _____, Signature _____."

Style and Format: Acceptable length of a manuscript is between 10 and 15 pages. The article may be written in English or French, and must be accompanied by a 100-200 word abstract (if possible, in the other language). Please submit original diagrams, drawn in India ink and camera-ready. Prospective authors are asked to place references to their own work on a separate sheet and to follow the style and content requirements detailed in the Publication Manual of the American Psychological Association (3rd. ed.), Washington, DC: APA, 1983.

Manuscript Review: Manuscripts submitted to the journal are assessed anonymously by two members of a Review Board, using the following criteria:

Assessing content
Internal validity - relatedness: Is the problem the paper deals with identified? Is the design of the research or the structure of the essay appropriate to the question asked? Are the statistical, research and logical methods appropriate? Can the findings be justified by the data presented? Are the implications based on the findings?
External validity - relevance, accountability: Is the question worth asking? Is the problem of concern? Are there problems of confidentiality or ethics? Are the findings of the research or the conclusions of the essay significant? Can the findings or the conclusions be applied in other situations? Does the article contribute to knowledge in nursing? In what way?

Assessing presentation
Are the ideas developed logically? Are they expressed clearly? Is the length appropriate to the subject? Does the number of references or tables exceed what is needed?

Publication Information: On receipt of the original manuscript, the author is advised that the editorial board's response will be forwarded within ten weeks. When a manuscript is returned to the author for revision, three copies of the revised manuscript (dated and marked 'revised') should be returned to the editor within four weeks. The complete procedure of review, revision, copy editing, typesetting, proofreading and printing may result in a six to eight month lapse between submission and publication.

RENSEIGNEMENTS A L'INTENTION DES AUTEURS

La revue canadienne de recherche en sciences infirmières accueille avec plaisir des articles de recherche ayant trait aux sciences infirmières et aux soins de la santé. Veuillez adresser vos manuscrits à la rédactrice en chef, *La revue canadienne de recherche en sciences infirmières*, Ecole des sciences infirmières, Université McGill, 3506 rue University, Montréal, QC, H3A 2A7.

Modalités: Veuillez envoyer trois exemplaires de votre article dactylographié à double interligne sur des feuilles de papier de 216mm x 279mm en respectant des marges généreuses, accompagné d'une lettre qui indiquera le nom, l'adresse et l'affiliation de l'auteur ou des auteurs. 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 conformément à la formule suivante: "Je déclare par la présente que je suis le seul propriétaire de tous droits relatifs à mon article intitulé ' ' et je cède mon droit d'auteur à l'École des sciences infirmières de l'Université McGill, pour fins de publication dans *The Canadian Journal of Nursing Research/La revue canadienne de recherche en sciences infirmières*. Date _____, Signature _____."

Style de présentation: La longueur acceptable d'un article doit osciller entre 10 et 15 pages. Les articles peuvent être rédigés soit en anglais, soit en français et ils doivent être accompagnés d'un résumé de 100 à 200 mots (si possible, dans l'autre langue). Veuillez remettre l'original des schémas, dessinés à l'encre de Chine et prêts à être photographiés. Les auteurs sont tenus de fournir les références à leurs propres oeuvres sur une feuille séparée et de suivre les consignes énoncées dans le Publication Manual of the American Psychological Association (3rd. ed.), Washington, D.C.: APA, 1983, en ce qui concerne le style et le contenu de leurs articles.

Examen des manuscrits: Les manuscrits présentés à la revue sont évalués de façon anonyme par deux lectrices selon les critères suivants:

Evaluation du fond
Validité interne: Le problème dont traite l'article est-il clairement défini? La forme des recherches ou la structure de l'essai sont-elles appropriées à la question soulevée? les méthodes statistiques, logiques et les modalités de recherche sont-elles appropriées? Les conclusions peuvent-elles être justifiées à l'aide des données présentées? Les implications de l'article sont-elles fondées sur les conclusions?
Validité externe: Le problème soulevé présente-t-il un intérêt véritable? Ce problème est-il d'actualité? Existe-t-il des problèmes de divulgation ou de déontologie? Les conclusions de la recherche ou de l'article sont-elles importantes? Ces conclusions ou résultats peuvent-ils s'appliquer à d'autres situations? Est- ce que l'article contribue à l'avancement du savoir dans le domaine des sciences infirmières? De quelle façon?

Evaluation de la présentation
L'auteur développe-t-il ses idées de manière logique? Les exprime-t-il clairement? La longueur de son article est-elle appropriée au sujet abordé? Est-ce que le nombre de références ou de tableaux dépasse le strict nécessaire?

Renseignements relatifs à la publication: A la réception du manuscrit original, l'auteur est avisé que le Comité de rédaction prendra une décision au sujet de la publication de son article dans les dix semaines. Lorsqu'un manuscrit est renvoyé à son auteur pour qu'il le remanie, trois exemplaires dudit manuscrit remanié (daté et portant l'inscription "revu et corrigé") doivent être renvoyés à la rédactrice en chef dans les quatre semaines. Les modalités complètes de lecture, de remaniement, d'édition, de composition et d'imprimerie expliquent qu'il s'écoule souvent de six à huit mois avant qu'un article soumis soit publié.

McGILL UNIVERSITY
SCHOOL OF NURSING

GRADUATE PROGRAMS IN NURSING

MASTER OF SCIENCE (WITH THESIS)
MASTER OF SCIENCE (APPLIED)

These programs have been designed to prepare clinicians and researchers for the expanding function of nursing within the health care delivery system. Preparation for the teaching of nursing or the management of nursing service is also offered.

Admission requirements

Either a Baccalaureate degree in Nursing comparable to B.Sc.(N) or B.N. from McGill; or a Baccalaureate degree comparable to B.A. or B.Sc. offered at McGill (for those with no nursing preparation).

Length of program

Two years for those with nursing degrees;
Three years for non-nurses.

Language of study: English

Further information from:

Associate Director, School of Nursing
Graduate Programs
3506 University Street
Montreal, QC, H3A 2A7

Enquiries regarding **Ph.D. studies**
should also be made to the
Associate Director, Graduate Programs