

THE STATUS OF CANCER NURSING RESEARCH IN CANADA

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Over the past several decades nurses have demonstrated their commitment to the generation of knowledge which will improve both the long-term survival and the quality of life for people with cancer. As the medical specialty of oncology emerged in the 1950's, nurses became involved in the management of biomedical research. Their efforts were directed toward maintaining the integrity of the research design, given the constraints of the clinical setting, and to recruiting patients in an ethically sensitive manner. The psychosocial support provided by these research nurses to patients enrolled in particularly toxic therapeutic trials has probably reduced problems with attrition and subsequent evaluation of the therapeutic effectiveness of different treatment regimens.

The past decade has seen the development among nurses of another type of commitment to the scientific enterprise with the emergence of cancer *nursing* research. Clinicians and academics have identified priorities within this field of research (Oberst, 1978), and are generating an increasingly impressive body of literature (Grant and Padilla, 1983). Scientific inquiry in cancer nursing has tended to focus on the interactions between physical/biological processes and psychosocial responses and adaptations (Benoliel, 1983).

If Canadian nurses are to contribute to this scientific enterprise, it is essential that they have arenas within which they can compete for research funding. Two questions might be posed:

1. What types of cancer research are Canadian nurses currently conducting?
2. What funding sources are nurses approaching to support their research?

A decision was made to conduct a limited survey of Canadian nurses to determine the answers to these two questions.

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Review of Literature

Benoliel (1983) traced the development of cancer nursing research within the United States. She identified three forces which have shaped this development. First, nursing's traditional interest in the care and comfort of people has defined the nature of investigations within the field of cancer nursing research. For example, many projects have studied the assessment of distress and discomfort associated with cancer and its treatment, as well as nursing interventions designed to alleviate this distress and discomfort. Second, the movement of large numbers of nurses into graduate study for clinical specialization introduced them to the process and methods of science. This education enabled nurses to frame questions of clinical interest so that they could become "researchable" problems. Third, the clinical experiences of cancer nurses have influenced the specific problems they have selected to study. Nursing observations of the difficulties experienced by patients and families have frequently provided the stimulus for establishing research programs.

Grant and Padilla (1983) recently reviewed studies published in the field of cancer nursing research since 1970. They found that the past three years have witnessed the most rapid growth of oncology nursing studies. Grant and Padilla reported the following distribution among the 275 nursing studies they reviewed:

1. The majority of all studies (148 or 54.2%) were classified under the concept of health-illness continuum, revealing an overall priority for research of clinical problems.
2. The second largest group of studies (92 or 33.4%) related to the individual and his family, with the largest cluster of studies related to psychosocial responses and nursing interventions.
3. Less frequent areas for cancer nursing research were the community and the environment (19 or 6.9%), and the health care system (15 or 5.4%).

Grant and Padilla recommended that the strong clinical emphasis in cancer nursing research continue.

Conceptual Framework

The framework for development of the survey questionnaire was provided by McCorkle and Lewis (1980). These investigators distinguished between nursing involvement in the conceptual stage and in the empiric stage of research. Nurses are frequently involved in the empiric stage of either biomedical or cancer nursing research in their familiar roles as data collectors. However, nursing involvement in the conceptual phase of research has been less conspicuous. This

issue is a significant one since the formulation of research questions is profoundly influenced by the professional background and academic preparation of the investigator. In this survey, a decision was made to focus on nurses as principal investigators involved in the conceptual phase of cancer nursing research.

The framework for analysis of the types of cancer nursing research ongoing in Canada was provided by Oberst (1978). She identified priorities for cancer nursing research using the Delphi technique. This technique elicits collective opinion or consensus through repeated individual questioning of persons knowledgeable in a particular area. A list of 1800 researchable items was generated from data supplied by an initial panel of 575 nurses. A final list of 101 items were ranked according to their impact on patient welfare and their value for practising nurses. The ten items Oberst ranked most highly with respect to their impact on patient welfare were selected as the primary framework for analyzing ongoing cancer nursing research in Canada.

The Survey Questionnaire

A simple two page questionnaire was designed to identify nurse principal investigators conducting research in which cancer patients and/or their caregivers were the subjects. The questionnaire requested a variety of information, including: names of co-investigators; academic degrees of principal and co-investigators; whether the research was being completed for a degree; and questions about funding sources. The title and abstract of the study was requested, as well as onset and projected completion dates of the research. The data base generated by this questionnaire was judged to be sufficient to make preliminary statements about the status of cancer nursing research in Canada.

Methods

During the summer of 1983, the survey questionnaire was mailed to all cancer centers, University Schools of Nursing, and Victorian Order of Nurses (V.O.N.) agencies in Canada. A total of 121 institutions were surveyed, with an overall response rate of 42.9 per cent (see Table 1). However, response rates for schools of nursing (at 60 per cent) and cancer institutes (at 64 per cent) were considerably higher. All questionnaires returned prior to October 1, 1983, were included in this analysis.

Data Analysis

A total of 32 or 61.5 per cent of responding institutions returned questionnaires uncompleted because they were not currently conducting cancer nursing research (see Table 2).

Table 1
 Cancer Nursing Research Questionnaire
 Returns by Type of Institution

Institution type	Questionnaires sent	Questionnaires returned
V.O.N.	71	21 (29.6%) ^a
Schools of Nursing	25	15 (60%)
Cancer Centers	25	16 (64%)
Totals	121	52 (42.9%)

^aRow per cent

Table 2
 Cancer Nursing Research Projects
 Identified by Type of Institution

Institution Type	Ongoing Research		Number of Projects
	No	Yes	
V.O.N.	19	2	2
Schools of Nursing	5	10	22
Cancer Centers	8	8	16
Totals	32	20	40

The greatest level of research activity (on both an institutional and per project basis) was in schools of nursing with 10 schools reporting at least one ongoing project in cancer nursing research. Fifteen projects submitted by cancer centers were omitted from the analysis because 10 were biomedical in nature and 5 were completed prior to 1983.

The remaining 40 projects were categorized according to Oberst's framework using their titles and, where available, study abstracts. The following categorization sequence was implemented. First, an attempt was made to categorize each project into one of the ten research items ranked as having the highest "impact on patient welfare". If this categorization failed, an attempt was made to classify the project into one of the ten research items ranked as having the highest "value for practicing nurses". If this categorization failed, an attempt was made to generate a category name appropriate to the research project. A total of 36 of the 40 projects could be categorized using this system.

Table 3

Cancer Nursing Research Projects Categorized by
Oberst's Priorities for "Impact on Patient Welfare"

Item	Schools of Nursing	Cancer Centers	V.O.N.
3. Establish discharge planning and follow up programs	5	0	0
4. Identify nursing interventions which assist patients and families to cope with grief	1	0	0
5. Find effective ways to prevent and/or treat stomatitis	0	1	1
7. Delineate modifications in physical plant, nursing care program, and policy which promote comfort and dignity for the dying	2	1	1
9. Develop more effective methods of psychological support for patients and families	9	0	0
10. Clarify the dying person's rights to make decisions about his health care	1	0	0
Totals	18	2	2

The distribution of ongoing projects in cancer nursing research by Oberst's priorities for impact on patient welfare is illustrated in Table 3. The single most frequent category for study is "develop more effective methods of psychological support for patients and families at various stages of diagnosis and cancer treatment". The second most frequent category is "establish discharge planning and follow up which effectively mobilize patient, family and community resources". All of these studies are occurring in schools of nursing. While 18 of the 22 school of nursing projects could be classified according to Oberst's primary framework, only three of the 16 cancer center projects could be so classified. Table 4 illustrates projects identified by Oberst as having the highest value for practising nurses.

Table 4

Cancer Nursing Research Projects Categorized by
Oberst's Priorities for "Value for Practising Nurses"

Item	Schools of Nursing	Cancer Centers	V.O.N.
1. Assess the psychological impact on the nurse of sustained exposure to the problems which cancer imposes upon patients and families and develop appropriate emotional support systems for staff	0	1	0
2. Establish effective educational and support systems to assist nurses in planning care for the dying and in coping with their own feelings of grief, loss, and frustration	1	0	0
3. Identify and determine the best approach to meeting specific learning needs of nurses in various settings regarding the nature of cancer, major treatment modalities, and specific nursing techniques	0	1	0
Totals	1	2	0

Only three studies were classified according to this framework. The majority of studies being conducted within cancer centers required additional categories to facilitate their classification (see Table 5). The two categories most frequently identified in projects being conducted within cancer centers were: "determine effects of patient education materials/methods"; and, "assess quality of life of cancer patients".

Table 5
Cancer Nursing Research Projects
by Additional Categories

Item	Schools of Nursing	Cancer Centers	V.O.N.
Determine effects of patient education materials and methods	1	3	0
Assess quality of life in cancer patients	0	3	0
Determine the effectiveness of relaxation therapy	0	2	0
Survey staff attitudes	0	2	0
Other	1	2	1
Totals	2	12	1

Of the 40 projects analyzed in this survey, 17 were supported by funding in addition to the salaries of the principal investigators. Table 6 illustrates the sources of funding by type of institution. The provincial research boards of the four western provinces have been the most frequent sources of funding for cancer nursing research, with approximately \$160,000 allocated to ongoing projects during the past two years. Two nurse respondents indicated that they had been unsuccessful in obtaining funding in a National Cancer Institute of Canada competition.

Table 6
Sources of Funding for Cancer Nursing
Research Projects by Type of Institution

Sources of Funding	Schools of Nursing	Cancer Centers
Provincial Research Boards	3 (3) ^a	3
University Research Boards	3	0
National Health Research and Development Program	3	0
Local Cancer Institute	1	0
Local Foundation	1	0
Totals	11 (3) ^a	3

^aFunds applied for but not yet granted.

Thirteen of the 40 projects analyzed were being conducted to satisfy requirements for a degree. Three of these projects had received external funding, while 10 had not. Projects which were not being conducted to satisfy the requirements for a degree had nurse principal investigators who were, for the most part, prepared with Master’s degrees.

Discussion

The findings of this survey must be examined in light of the low overall response rate to the questionnaire (42.9 per cent). Because institutions not involved in cancer nursing research were considered to be less likely to return the questionnaire unanswered, the findings may under-represent the number of cancer nursing research projects ongoing in Canada. Institutions other than those surveyed, such as hospitals and psychiatric institutes, may also be initiating cancer nursing research. However, the 40 projects identified in this survey provide a starting point for understanding the developing field of cancer nursing research in Canada.

The major institutional settings in which cancer nursing research is being conducted in this country are university schools of nursing. Not surprisingly, these nurse principal investigators are conducting research on types of psychological support for cancer patients, and on

discharge and followup programs for patients in the community. Studies on clinical problems of more immediate relevance to clinic nurses are noticeable through their absence. No studies were identified in areas highest ranked by Oberst and relating to relief of nausea and vomiting and relief of pain. Until nursing research within cancer centers becomes a more frequent phenomenon, it is unlikely that this type of research will be developed with a nursing conceptual framework.

The emphasis within cancer centers is on development of patient education methods and materials, and on assessment of the quality of life of cancer patients. Other studies relate to the relief of stomatitis, the evaluation of the effectiveness of relaxation therapy as a nursing intervention, and surveys of staff attitudes. Perhaps because of the variety of pressing clinical problems perceived by the nurse principal investigators, the nursing research being conducted within cancer centers was less focussed on only a few categories of research.

Most cancer nursing research is not externally funded. Nurses are being successful in obtaining funding from the western provincial research boards, with additional support coming from university research boards and the National Health Research and Development Program. The fact that few nurse principal investigators are prepared at the doctoral level is probably a disadvantage in seeking national funding.

Recommendations

A number of general recommendations for the development of the field of cancer nursing research are found in the literature. These include:

1. The development of sound conceptual frameworks which are relevant to practice and integrated from a variety of related disciplines (McCorkle & Lewis, 1980).
2. The development of more rigorous designs that have validity, generalizability, sensitivity and efficiency (Grant & Padilla, 1983).
3. The development of programatic research (Degner, 1983).
4. The development of collaborative research efforts (Hilkemeyer, 1982).

Implementation of each of these recommendations is of critical importance to the development of cancer nursing research in Canada. As increasing numbers of Canadian nurses are prepared with doctoral degrees, the opportunities for joint appointments between schools of nursing and cancer centers should be pursued to facilitate the develop-

ment of research proposals with the greatest impact on patient welfare and the greatest value for practising nurses. The formation of a collaborative cancer nursing research group at the national level would also facilitate this process.

Summary

This survey of the status of cancer nursing research in Canada has revealed a small number of ongoing studies. These studies were analyzed and categorized using Oberst's (1978) framework for research which is identified as having the highest impact on patient welfare. Current sources of funding for cancer nursing research were discussed, and recommendations for future directions within Canada were formulated.

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RÉSUMÉ

L'état de la recherche infirmière sur le cancer au Canada

Les infirmières participent à la réalisation de la recherche biomédicale sur le cancer depuis plusieurs décennies, mais le domaine de recherche *infirmière* sur le cancer est récent. Un sondage a été effectué auprès des écoles de sciences infirmières au sein des universités, des centres de recherche sur le cancer et des agences d'infirmières visiteuses afin de déterminer le type de recherche infirmière sur le cancer en cours au Canada et de savoir quelles en sont les sources de financement. Ces travaux ont été réalisés auprès de 121 établissements et le taux de réponse globale a été de 42,9%. Le plus haut niveau d'activité de recherche a été observé au sein des écoles de sciences infirmières. Les 40 projets signalés ont été analysés à l'aide de l'échelle d'Oberst, les priorités de la recherche infirmière sur le cancer. Les catégories le plus souvent identifiées ont été "élaborer des méthodes plus efficaces d'appui psychologique" et "établir des programmes relatifs aux congés des malades." Dix-sept des quarante projets ont été subventionnés par des sources extérieures. Des recommandations au sujet du développement du domaine de la recherche infirmière sur le cancer au Canada font l'objet d'une discussion.

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