Important issues in clinical practice: Perspectives of oncology nurses

by Margaret I. Fitch, Debra Bakker, and Michael Conlon

Abstract

As the 1990s draw to a close, the cancer care environment is undergoing rapid change. Many issues exist within the complex environment of cancer care that could create a challenge in providing quality nursing care to patients. This study examined the current challenges oncology nurses face in their daily practice. Surveys were mailed to members of the Canadian Association of Nurses in Oncology asking them to indicate on a list of 80 issues which were problems in their daily practice. From the responses of 249 oncology nurses, the following items were ranked as the top 10 problems: anxiety, coping/stress management, bereavement/death, fatigue, metastatic disease, comfort, pain control and management, quality of life, recurrence of primary cancer, and nurse burn-out. Principal component analysis was conducted to determine if patterns existed in the way problems had been rated. Five components explained 42% of the variance in the data set: comprehensive cancer care, communication, experience of loss, terminal illness, and signs and symptoms. Implications for nursing practice, education and research are highlighted.

Introduction

As the 1990s draw to a close, providing nursing care for individuals with cancer and their families remains a challenge across Canada. Many issues exist within the complex environment of cancer care that contribute to the challenge of providing quality oncology nursing care.

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The demand for cancer care is on the rise because of an increasing incidence of cancer and the aging trend in the Canadian population. In 1998, 129,200 Canadians were expected to be diagnosed with cancer (NCIC, 1997). In the past decade, the number of new cases increased by close to 30,000, up almost one-third from the 100,000 cases diagnosed in 1988. This type of increase is expected to continue into the next decade. The increasing demand for cancer services will mean higher costs to maintain current levels of service. In addition, many of the new treatments currently under investigation and soon to be available are costly agents to administer (D. Cowan, personal communication, October 1998).

Concerns about the future and costs for health care have mobilized significant activity in health care reform. The subsequent restructuring and downsizing has had an impact in various ways. Care that once was delivered in hospitals is now being delivered in ambulatory settings or in the patient's home. Shortened hospital stays and a high frequency of same-day procedures mean individuals are going home with many needs for care. High patient-to-nurse ratios influence inpatient nurses' ability to provide patient education for self-care and to establish effective community links for patients following discharge. Frequently patients report that care is fragmented and coordination poor (Ontario Ministry of Health, 1992-3).

Advances in knowledge and technology have led to increasingly complex treatment protocols. It is not unusual for patients to receive chemotherapy and radiation therapy concurrently. Managing symptoms and counteracting side effects are ever-present issues for both nurses and patients.

The nature of cancer and its treatment also contributes to the complexity of delivering care. The diagnosis of cancer has an impact that is not only physical but also emotional, psychological and spiritual. For many individuals, cancer is equated with a "death sentence". Coping with cancer means an individual must handle a multitude of feelings and practical concerns. Patients frequently express frustration concerning how difficult it is to achieve timely access to relevant, understandable information that would help them cope (Ontario Ministry of Health, 1992-3). Patients also report lack of access to supportive care services or programs (McLeod, 1994).

Another trend which has added challenge to the delivery of cancer care is the rising survivor advocacy movement. Survivors are advocates for change in the cancer care system. They are calling for increased access to information and increased participation by patients in decision-making about their care. Frequently, these types of requests are perceived by busy oncology staff as demands that increase the length of clinic appointments and interfere with clinic efficiency. Additionally, many patients are actively pursuing complementary and alternative therapies in an attempt to exert some control over their situation and enhance their well-being (Gray et al., 1997). However, many alternative therapies are not supported with empirical evidence and oncology nurses may experience a sense of conflict in discussing them with patients.

Oncology nurses cannot help but be influenced by the changing cancer care environment. Challenges emerge for nurses as they strive to provide quality care within the constraints and pressures of the working environment. Dealing with these new practice challenges has implications for education, research and policy development.

The purpose of this investigation was to identify the current challenges oncology nurses face in their daily practice. Once identified, the challenges can provide a basis for future investigation and program development. In particular, challenges which occur most frequently could pinpoint priorities for action by researchers, administrators, educators and professional nursing associations.

Therefore, this study examined the perspectives of nurses who work in oncology care settings about the clinical and professional issues that are recognized as problems in their daily practice.

Methods

Data about important clinical issues were gathered from nurses working in oncology care settings. Eight hundred and ten questionnaires were mailed using the 1995 Canadian Association of Nurses in Oncology (CANO) membership listing. Respondents were requested to complete and return the questionnaire anonymously within four weeks. A reminder letter was sent after four weeks as a means of increasing the response rate.

A demographic data form and a survey questionnaire were developed by the investigators. The survey questionnaire included an alphabetical listing of 80 topic items. The items were derived from topics included in previous Oncology Nursing Society research priority surveys (Funkhouser & Grant, 1989; Mooney, Ferrell, Nail, Benedict & Haberman, 1991; Stetz, Haberman, Holcombe & Jones,

1995) as well as from newly emerging issues identified in the oncology nursing literature. Topics covered a wide range of areas including biophysiological (e.g., pain control and management, stomatitis, nutrition) and psychosocial (e.g., patient disclosure, communication) patient issues that spanned the cancer care spectrum. In addition, professional issues such as models of nursing care and oncology nurse job satisfaction were included in the list. An "other" category also was included to allow respondents to write in items that they perceived were missing.

For each topic item, respondents were instructed to answer two questions. The first question asked them to indicate the extent to which the item posed a problem in their daily practice. A problem was defined "as an issue or situation needing a solution or better information". Respondents rated an item as a problem according to the following scale: not at all, sometimes, often, always, or do not know. The second question asked respondents to indicate the extent to which the item should be given nursing research attention according to the following scale: none, some, or a lot.

Questions pertaining to nurses' perceptions about research priorities were also included in the questionnaire. Data collected from the research priorities questions are presented elsewhere (Bakker & Fitch, 1998).

Results

Sample characteristics

Of the 810 surveys mailed to CANO members, 249 were returned for a response rate of 31%. Table One shows the demographic characteristics of the nurse respondents. The majority (61%) of respondents were between 35 and 49 years of age. Over 40% had been employed for 16 to 25 years in nursing and most (60%) had been employed in oncology from six to 15 years. In terms of their clinical practice, the respondents predominantly worked with adult cancer patients in hospital or ambulatory care settings. Seventy-three per cent reported that more than 75% of their practice involved caring for cancer patients. Of the 16.5% of nurses with post-graduate university degrees, the majority were at the Masters level.

Topics identified as important clinical problems

To determine important clinical problems as perceived by oncology nurses, rank order listings of the 80 topic items were developed. First, a total score was calculated for each item based on how respondents rated the item as a "problem" in their clinical practice. Points were assigned as follows: three points for "always a problem"; two points for "often a problem"; one point for "sometimes a problem"; and zero points for "not a problem" or "do not know". The item's rank order was determined by total points accumulated.

The top 10 clinical problems for the overall study sample (n=249) are shown in Table Two. Beside each item is its total score and the

Table One: Demographic characteristics of Canadian Association of Nurses in Oncology member respondents (N=249)

Variable	Frequency	
	Number of participants	Percentage
Age		
< 35	38	(15.3)
35-49	152	(61.0)
≥ 50	59	(23.7)
Years employed in nursing		
≤ 5	12	(4.8)
6-15	61	(24.5)
16-25	108	(43.4)
≥ 26	66	(26.5)
missing	2	(0.8)
Years employed in oncology		
≤ 5	62	(24.9)
6-15	150	(60.2)
16-25	27	(10.8)
≥ 26	5	(2.0)
missing	5	(2.0)
Highest degree obtained		
Diploma	98	(39.4)
Baccalaureate	81	(32.5)
Masters/PhD	41	(16.5)
missing	29	(11.6)
Client population		
Adults	199	(79.9)
Children	10	(4.0)
Both	39	(15.7)
missing	1	(0.4)
Percentage of daily patients with cancer		
≤ 25%	37	(14.8)
26-50%	12	(4.8)
51-75%	16	(6.4)
76-95%	29	(11.6)
96-100%	153	(61.4)
missing	2	(0.8)
Workplace		
Hospital	90	(36.1)
Ambulatory care	94	(37.8)
Community	32	(12.9)
missing	33	(13.3)

Table Two: Overall rank order of clinical problems (N=249)

Item	Total score	Number of times rated as "always a problem"
Anxiety	503	66
Coping/stress management	456	50
Bereavement/death	450	50
Fatigue	432	45
Metastatic disease	428	42
Comfort	415	49
Pain control and management	406	33
Quality of life	405	45
Recurrence of primary cancer	401	34
Nurse burn-out	400	44

number of times (frequency) it was rated as “always a problem”. The top ranked clinical problem was anxiety. This topic was rated as “always a problem” by 27% (66/249) of the sample. In accumulative points, the total score for “anxiety” ranked 47 points above the second ranked topic. The point difference between the total scores of the second place item and tenth place item was 56 points (score range 456-400). The other items included in the top 10 clinical problems included psychosocial issues of coping/stress management, bereavement/death, comfort and quality of life and biophysiological issues related either to symptom management (e.g., fatigue) or disease stage (metastatic disease). The only professional issue that surfaced in the top 10 list was nurse burn-out which received a ranking of 10.

For purposes of further analyzing perceptions of clinical problems, rank orders of important clinical problems were determined for subgroups of the oncology nurse sample. Table Three shows the rank order of clinical problems according to the age of respondents. Age was selected as a variable because of the potential influence life experience could have on one’s perception of what constitutes an issue or problem. In each column, the top 10 items are listed. Beside each item is its total score and the number of times (frequency) it was

rated as “always a problem”. In all three age groups, “anxiety” was ranked as the most important clinical problem. With respect to differences in the lists, the younger age group was the only group to include a communication issue (specifically communication between patient/physician) as a top ranked clinical problem. Rankings determined from responses of the more mature group of nurses showed that this group ranked topics such as metastatic disease and recurrence of primary cancer higher as clinical problems than did their younger nurse colleagues.

The majority of respondents (61%) in the study were in the middle age group of 35 to 49 years. The rank ordered list of this group most closely resembled the list determined for the overall sample and the lists share the same top four choices. As rank orders of clinical topics were determined by total scores, it is likely that the responses of the middle age group contributed proportionately more to the overall ranking of items for the entire study sample. As a result, this nurse subgroup was analyzed separately and rank order lists were determined based on education and workplace for the subgroup of oncology nurses aged 35 to 49 years.

Table Three: Rank order of clinical problems by age group

Age < 35 years (n=38)		
Item	Total score	Number of times rated as “always a problem”
Anxiety	80	13
Bereavement/death	75	10
Communication - patient/physician	70	7
Pain control and management	70	7
Anticipatory grieving	69	9
Fatigue	68	9
Comfort	68	8
Nausea/vomiting	68	7
Coping/stress management	66	8
Metastatic disease	65	7

Age = 35-49 years (n=152)		
Item	Total score	Number of times rated as “always a problem”
Anxiety	314	44
Coping/stress management	294	32
Bereavement/death	272	29
Fatigue	265	27
Comfort	260	31
Metastatic disease	256	21
Pain control and management	255	22
Nurse burn-out	249	26
Quality of life	248	29
Symptom management	248	26

Age ≥ 50 years (n=59)		
Item	Total score	Number of times rated as “always a problem”
Anxiety	109	9
Metastatic disease	107	14
Recurrence of primary cancer	104	10
Bereavement/death	103	11
Fatigue	99	9
Coping/stress management	96	10
Quality of life	95	11
Nutrition	94	5
Nausea/vomiting	92	7
Anticipatory grieving	88	7

Table Four: Rank order of clinical problems by age group (35-49), further subdivided according to education

Diploma (n=62)		
Item	Total score	Number of times rated as “always a problem”
Anxiety	127	16
Coping/stress management	121	15
Fatigue	111	13
Metastatic disease	108	11
Nurse burn-out	106	15
Bereavement/death	103	11
Comfort	100	12
Recurrence of primary cancer	100	8
Pain control and management	99	7
Symptom management	98	9

Baccalaureate (n=45)		
Item	Total score	Number of times rated as “always a problem”
Anxiety	89	11
Bereavement/death	89	10
Coping/stress management	87	9
Cost containment	81	10
Comfort	79	10
Pain control and management	79	8
Cancer in the elderly	78	5
Nurse burn-out	76	7
Ethics	76	8
Quality of life	73	9

Masters/PhD (n=32)		
Item	Total score	Number of times rated as “always a problem”
Anxiety	72	14
Outcome measures for interventions	69	12
Bereavement/death	65	8
Coping/stress management	64	7
Communication - patient/physician	63	7
Comfort	62	9
Quality of life	62	8
Ethics	60	9
Communication - family/nurse	60	7
Symptom management	60	7

Table Four illustrates the rank order of clinical problems according to three education levels for the subgroup of respondents aged 35 to 49 years. In all three education levels, the highest ranked problem was anxiety. Both the diploma and baccalaureate prepared nurse groups included nurse burn-out as a clinical problem, ranking it number 5 and number 8 respectively. In the group of Master's/PhD prepared nurses, outcome measures for interventions received the second highest ranking. As well, for this education subgroup, issues of ethics, patient/physician communication and family/nurse communication appeared on the priority list but were absent from the lists of the diploma and baccalaureate prepared education subgroups. The baccalaureate prepared nurses were the only group to include cost containment as an important clinical problem.

In terms of workplace, respondents aged 35 to 49 years who were employed in either hospital or ambulatory care settings rated anxiety as the number one clinical problem (Table Five). The rank listings of respondents working in both hospital and ambulatory care shared further similarities and included the topics of coping-stress management, bereavement/death and nurse burn-out in their top seven rankings. In contrast, similarly aged respondents employed in community settings ranked outcome measures for interventions as the most important clinical problem. This community group also included patient decision-making, cancer in the elderly and patient education in their top 10 clinical problems.

Patterns of important clinical problems

Exploratory principal component analysis was employed to look for patterns of perceived important clinical problems. This technique was selected because of the many past demonstrations of its usefulness for revealing patterns among variables or items (Ferketich & Muller, 1990; Norman & Streiner, 1994). The technique explores the relationship among items and identifies the degree to which items correlate with a smaller number of underlying components. For the purpose of this study, principal component analysis was used to identify groupings of items that correlate strongly with each other according to the sample of oncology nurses' responses on the rating scale.

Prior to conducting the principal component analysis, the entire data set was reviewed for the purpose of eliminating items consistently not considered to be a problem by the respondents. In doing this, the original 80 items listed in the questionnaire were re-sorted and all items reported as "not a problem" or "do not know" were eliminated. The reduced "clinical problem data set" contained 41 items that were consistently reported as a problem within the categories of "sometimes", "often" or "always". The final data set of 41 items with the sample of 249 met the criteria of having a minimum of five cases per item and at least 100 subjects, making it suitable for principal component analysis (Norman & Streiner, 1994).

The analysis initially extracted 11 components with eigenvalues greater than one. Using the criterion of Cattell's Scree Test, the first five components were retained. These five components explained 42% of the variance in the data set and each component explained at least 4% of the variance (Table Six).

Table Seven shows the five components and lists the items that significantly loaded on each component. In total, 24 of the 41 items in the dataset had loadings greater than 0.4 on one of these five components.

In naming each of the five components, the investigators examined the conceptual fit between the items in each component and selected

Table Five: Rank order of clinical problems by age group (35-49), further subdivided according to workplace

Hospital (n=48)		Number of times rated as "always a problem"
Item	Total score	
Anxiety	101	18
Coping/stress management	92	10
Comfort	85	12
Bereavement/death	85	10
Pain control and management	84	7
Cost containment	82	14
Nurse burn-out	81	8
Symptom management	80	8
Ethics	77	8
Psychological counselling	76	8
Ambulatory Care (n=61)		Number of times rated as "always a problem"
Item	Total score	
Anxiety	124	14
Fatigue	116	12
Metastatic disease	110	9
Coping/stress management	109	9
Nurse burn-out	102	13
Bereavement/death	98	8
Cancer survivorship	94	7
Comfort	94	7
Recurrence of primary cancer	94	7
Communication - patient/physician	94	5
Community (n=19)		Number of times rated as "always a problem"
Item	Total score	
Outcome measures for interventions	41	8
Bereavement/death	40	6
Comfort	39	6
Coping/stress management	39	3
Anxiety	38	4
Pain control and management	37	5
Patient participation in decisions	36	7
Cancer in the elderly	36	2
Patient education	35	6
Quality of life	35	4

Table Six: Eigenvalues and variance explained for the first five extracted principal components.
The five components explained 42% of the total variance in the problem items dataset.

Principal Component	Eigenvalue	Percentage of Variance	Cumulative Percentage
PC1	9.7	24.2	24.2
PC2	2.0	5.1	29.3
PC3	1.9	4.7	34.0
PC4	1.6	4.0	38.0
PC5	1.6	4.0	42.0

names reflecting a common underlying theme. The first component, entitled "Comprehensive Cancer Care", included seven items describing dimensions of life that should be considered in the care of the whole person. The items reflected both the quality and quantity of life, as well as physical, psychological, and social aspects of an individual's life. The "Communication" component included three items describing information channels among health care professionals and patients and families. The only information channel not included here was the patient/nurse communication link. The third component encompassed five items describing emotional responses or circumstances related to the "Experience of Loss". The fourth component contained four items associated with "Terminal Illness". The fifth component, "Signs and Symptoms", included five items related to symptoms or reactions to the disease of cancer and its treatment.

Discussion

This survey investigation was undertaken to identify the problem issues oncology nurses experience in their daily clinical practice. The clinical setting for cancer care delivery is undergoing rapid change and oncology nurses cannot help but be influenced by these changes. Identification of the clinical issues which are consistently experienced as problems was anticipated to have implications for action by practitioners, researchers, educators and administrators. This is the first Canadian study to explore this issue using a comprehensive topic list and requesting ratings which necessitated comparing and contrasting one's practice experience regarding different topic areas.

The tool developed for this study had some limitations. It was comprehensive in listing topic areas and allowed participants to add topics they thought were omitted. However, the tool did not include definitions or descriptions of each item topic and participants may not have had entirely the same ideas about a particular topic when they rated it on the survey. The instrument also did not allow the participants the opportunity to indicate why a particular topic was perceived as a problem. Further investigation is required to fully understand the underlying reasons any one topic area is considered a problem. The rating, however, provides an overall perspective on the types of clinical issues oncology nurses are currently confronting in their daily practice.

The present study sample included proportionally more nurses in the middle age group (35 to 49 years of age) in comparison to registered nurses in Canada (Statistics Canada, 1993) and fewer nurses in the younger age group (less than 35 years). No similar Canadian statistics are currently available describing subgroups of

nurses involved in specialty care with regards to age, education or workplace. Therefore it is not known whether the study sample accurately represents the age profile of oncology nurses in Canada. Due to the expertise in knowledge and skill required in oncology nursing and its recognition as a specialty field, it may be likely that an employment requirement includes nursing experience. Thus, this may be reflected in the over-representation of nurses in the middle age group. However, recent lay-offs of younger nursing staff in many clinical settings may also be a contributing factor.

The study sample represents a group of nurses who have considerable clinical experience. Thus, the participants are familiar with cancer care and have the ability to identify important clinical issues. As with all survey studies, respondents likely reflect the views of oncology nurses who have an interest in this topic and may not represent the views of all oncology nurses.

The top clinical problems are clearly within the scope of oncology nursing practice (Table Two). Nine are patient-oriented with five focusing on psychosocial problems and four on biophysiological problems. Only one top problem reflects concerns about the individual nurse. The problems cross the range of potential types of clinical problems. These results were very similar to the one other study in Canada which examined nurse perceptions of difficult patient problems (Bramwell, 1989).

Although it is not clear from these data why particular problems surface in this top 10 list, one could argue that the nine patient-oriented problems are all complex clinical topics involving both physical and psychosocial dimensions. All require indepth assessment to fully understand the patient's experience and the interplay between the physical and psychosocial dimensions, as well as to select or tailor interventions for the particular individual. The ranking may reflect the frequency with which the clinical phenomenon is observed in cancer patients coupled with an inability on the part of the nurse to respond appropriately. This inability to respond may be a function of lack of time to perform the assessment and tailor the intervention, a lack of knowledge about the proper intervention, or the application of interventions which are not successful. Lack of knowledge about a particular clinical problem may arise either from not being aware of existing knowledge or because the knowledge itself is not yet available. The latter case is a call for intervention research while the former is a call for educational activity. However, lack of time may well be a reality in light of busy clinical practices and heavy workloads. Such an issue has implications for administrators regarding resource availability and expectations for quality care.

That nursing burn-out was identified as one of the top 10 clinical issues may reflect the number of participants who are front-line

Table Seven: Varimax rotated factor matrix and loadings of the first five principal components. All items are ranked according to their loadings from highest-lowest, including (loading value), and each item has a loading in excess of 0.4.

[PC1] Comprehensive Cancer care	[PC2] Communication	[PC3] Experience of loss	[PC4] Terminal illness	[PC5] Signs and symptoms
<ul style="list-style-type: none"> Quality of life (0.70) Quality of worklife (0.60) Supportive care (0.55) Realization of terminal condition (0.54) Sexuality (0.53) Symptom management (0.51) Psychosocial support/counselling (0.47) 	<ul style="list-style-type: none"> Communication - physician/nurse (0.79) Communication - family/nurse (0.75) Communication - patient/physician (0.74) 	<ul style="list-style-type: none"> Anticipatory grieving (0.73) Body image (0.62) Anxiety (0.60) Bereavement/death (0.53) Anger (0.46) 	<ul style="list-style-type: none"> Impending death (0.70) Death of a patient (0.62) Metastatic disease (0.61) Recurrence of primary cancer (0.53) 	<ul style="list-style-type: none"> Depression (0.72) Denial (0.64) Altered role (patient) (0.50) Fatigue (0.44) Elimination (0.44)

providers. This study was undertaken at a time when hospital restructuring had started in Canada. Nursing positions had been reduced and workloads had increased. Feeling a dissonance between what a nurse believes ought to be done for patients and what can be done realistically can be a contributing factor to the identification of nurse burn-out (Bram & Katz, 1989). Particularly for oncology nurses, distress emerges when issues such as poor staffing, excessive use of registry staff, and unexpected crises interfere with their ability to care for patients (Cohen & Sarter, 1992).

Exploring the variations in ranking by age provided interesting observations. The variation in ranking by age group revealed the younger group (<35 years) as the only group to identify communication between patient and physician as a top issue. The majority of the nurses in the younger group worked in a hospital setting. Clearly, inpatient and outpatient settings have different challenges with regards to physician-patient communication. Perhaps in the inpatient setting nurses had the opportunity to observe patient-physician interaction on a regular basis and hear patient frustration about that interaction. Other possible explanations for this rating include the possibilities that these nurses may have been more sensitized to communication issues in their educational programs or they are still developing skills in dealing with this type of clinical issue.

In contrast to the young age group, issues of quality of life surfaced in the middle and mature groups along with higher ratings regarding metastatic disease and recurrent disease. This is in keeping with data revealed in a recent study of oncology nurses' perspectives on quality of life (Fitch, 1998). Many of the experienced nurses in Fitch's study described how experiences within their personal lives and within their practice during their careers culminated in a shift of perspective about the importance of quality of life issues. The shift often resulted in an increased sensitivity to quality of life issues and an emphasis on helping patients achieve their wishes regarding quality of life.

Exploring the influence of education and workplace on the rankings of the top 10 clinical problems was completed for the middle age group because of the undue influence of that group on the overall ratings. It is interesting that in the analysis by workplace, community nurses did not identify care in the home as an issue. Topics such as family issues and home care were included in the list of choices on the survey. The community group was rather small (n=19) and included nurses who worked in education/academic positions (n=13). This is a function of the mailing list as well in that relatively few community-based nurses were in the original CANO membership list. Hence, the views of front-line community nurses were not prevalent in the rankings. The ranking may reflect the academic or research interests of the individuals in the group and may, in turn, be a function of funding support for research or programs of study. Further work is needed to identify the perspectives of front-line community nurses regarding pressing clinical problems across Canada.

The variation in rankings by education may reflect workplace influences as well. The diploma and baccalaureate groups identified burn-out as an issue, but these groups also had the highest composition of front-line nursing staff working in institutional settings. Front-line staff in hospital settings may be at greater risk for burn-out than nurses working in other types of positions (Bram & Katz, 1989). In the Masters/PhD group, issues identified are likely a reflection of educational preparation. For example, this group identified outcome measures of intervention as a clinical priority, which could be a reflection of the exposure to research in graduate school or their current role.

Principal component analysis

This is the first Canadian study to utilize a principal component analysis to look for patterns in important clinical issues. The principal component analysis was valuable in providing a "big picture" of oncology nurses' perspectives. The analysis relates to the scoring of

items and how they relate together. In essence, groups of items are scored in relation to one another the same way. This could reflect a perception of the items as belonging to a broader underlying construct, theme, or clinical problem. For example, the factor of comprehensive cancer care includes a number of issues that are required or should be considered when providing overall cancer care to patients.

All five factors represent topics that are found in the top third of the overall rank order list of 80 items. Therefore, the factors can be considered representing patterns of "important" clinical problems as identified by practising oncology nurses. For example, "anxiety" is part of a construct/theme called "experience of loss" and is related to other items such as bereavement/death which also were ranked in the upper third of the overall listings.

The issue of communication surfaced in the principal component analysis as an underlying theme, but did not always surface as a top priority in the nurses' lists. This may be because the topic of communication was not presented as one topic in the original list of topics (issues), but rather as four individual items (e.g., communication nurse/patient, communication patient/physician). This may have diluted the emphasis or importance the sample placed on this topic as a whole.

While the variance explained by the first five components is low (42%), some patterns did emerge that explained variability in the data. However, most of the variation remained unexplained. Further research might help to identify factors that explain the patterns in importance of clinical problems. Future analysis needs to be completed individually for different clinical settings.

Nursing implications

The five factors cover significant aspects of clinical oncology nursing. Our data suggest these are areas where oncology nurses in this sample are experiencing problems on a regular basis. Given these findings, there are implications for action.

The data from this study could serve as a springboard for discussion with staff nurses. They could be presented at a unit or departmental level. The discussion could focus on whether the particular staff group share the perspectives expressed in this work and, if so, what they believe are the underlying factors contributing to those perspectives. Once the underlying factors are identified, direction for action may be clear. In addition, it will be important to help staff identify the factors over which they have some control and to focus change strategies in those areas.

Further research may well be indicated in certain areas (i.e. fatigue, anxiety, communication), not only in general terms but also concerning "brief" interventions which can be effectively provided in a busy clinical environment. Additionally, there may be indications for educational interventions for staff focused on assessment and appropriate referral for counselling, support and community programs.

Direction may also exist for strengthening the focus on research-based practice and making use of existing knowledge. For example, it is clear that knowledge exists regarding pain management. However, it would seem that knowledge may not be reaching front-line staff or our clinical settings have practices that interfere with the use of the existing information on a daily basis (Howell, Fitch & Rechner, in review). This may also be true for other topic areas.

Finally, there may also be indication for strengthening the advocacy role of oncology nurses. At times clinical problems exist but appropriate services are not available. This is frequently the case with supportive care services (Fitch, 1997). Developing explicit standards of practice for supportive care interventions and engaging strong advocacy for appropriate levels of service have been identified as necessary actions if we are to see an improvement in cancer care. Oncology nurses are in excellent positions to advocate for appropriate levels of patient-centered services.

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