

Which content of nursing breast cancer is nurse wanted to learn?

: Analysis of questionnaire survey from attendees of breast cancer nursing seminar

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Abstract

Purpose : To evaluate the contents of desire to learn about breast cancer nursing.

Materials and method : A total of 141 nurses who participated in the seminar on breast cancer nursing were enrolled in this study. The questionnaire consisted of the occupational backgrounds of the nurses, and 35 contents that nurses want to learn in breast cancer nursing. We examined the degree of desire to learn each content and the relationship between occupational backgrounds and 35 contents of learning using a 5-point scoring system.

Results : More than half of nurses strongly wanted to learn all of 35 contents. The majority of nurses wanted to learn the contents of nursing skills on disease notification, and nursing skills for psychological response. On the other hand, nurses did not want to learn the contents of consulting in support for sexual activity and nursing skills related to pregnancy and child birth. Nurses with experience of breast cancer nursing for less than 3 years wanted to learn the contents of chemotherapy and endocrine therapy more than those for over 3 years ($P < 0.05$). Nurses for outpatients were more eager to learn the contents of chemotherapy and nursing skills for outpatients than those for inpatients ($P < 0.05$). Nurses worked with medical specialists of breast cancer considered to learn the contents of nursing skills at disease notification and nursing skills for changed body shape more than those not worked ($P < 0.05$).

Conclusion : As the majority of the nurses have a strong motivation to learn about nursing for breast cancer patients, frequent educational chances for them must be considered properly and urgently.

Key words : breast cancer, content of learning, nursing care

Introduction

An incidence of breast cancer is the highest in Japanese women's cancers. It has been increasing gradually in recent years and is expected to increase from now on. Breast cancer in Japan is more frequent in those

aged from 45 to 59 years, who are occupied with various important roles in the society as well as at home. Due to the slow development of breast cancer, early diagnosis and treatment lead to better results than in other cancers. On the other hand, it is reported that recurrence occurs in about 30 % of the

breast cancer patients, the possibility of recurrence persists even after more than ten years from a curative operation. Therefore, a long-term careful scrutiny is necessary for the patients.

Recently, therapeutic options for breast cancer have been increasing and each or combined therapy has been performed on the basis of the different attributes of breast cancers in each patient. They are mainly endocrine therapy, anti-human-epidermal-growth-factor type 2 (HER2) therapy and chemotherapy. They are selected according to the clinical or pathological stages, prognostic risk factors and the presence of specific markers in each patient¹⁾²⁾. As the personalized medicine for patients with breast cancer proceeds, various nursing skills corresponding to the personalized patients are required. Therefore, high nursing skills as well as highly specific knowledge in relation to breast cancer are necessary for the nursing care in patients with breast cancer³⁾.

The importance of nursing care for the psychological influence to the patients in pre- and post-operative state have been reported⁴⁾⁵⁾. The usefulness of nursing care for the perception of side effects accompanying treatment⁶⁾, for patient's therapeutic decision-making⁷⁻⁹⁾, and that of social support for change in QOL in the daily living in patients with breast cancer¹⁰⁾¹¹⁾ have been also reported. However, nurses remain uncertain as to which content of nursing skills for breast cancer patients they wanted to learn³⁾. The first aim of this study was to evaluate the contents of nursing skills for breast cancer patients that nurses wanted to learn. Secondly, we investigated the relationship between the contents

that they wanted to learn and the occupational backgrounds of the nurses.

Materials and Methods

One hundred and seventy-four nurses who attended the seminar on breast cancer nursing in Fukuoka Prefecture were enrolled in this study. Questionnaires were distributed to the subjects, and collected by mail. One hundred and forty-one sets of questionnaires were collected (response rate, 81.0%).

The questionnaire consisted of the backgrounds of the subjects, such as year of experience in breast cancer nursing, and 35 contents, which were associating with nursing skills, basic and clinical medicine, behaviors of patient and social supporting systems, that nurses want to learn in breast cancer.

Eagerness for learning of each content was graded using a 5-point scoring system (eagerness score) as follows; from great=5 to none=1. The content reported more than 4 scoring point was defined as positively learning content and that reported less than 2 scoring point as negatively learning content.

Firstly, we assessed the number of positively learning content and that of negatively learning content in all contents.

Secondly, we investigated the relationship between occupational backgrounds of the nurses and 35 contents of learning by using the eagerness score.

Statistical analysis was performed using SPSS 16.0J for Windows. The data were analyzed using the Mann-Whitney method, Kruskal-Wallis method. Significant difference was defined as $p < 0.05$.

We described in the questionnaire about

the purpose and the methodology of this research, protection of participants' privacy and the confined analysis of the results exclusively for this research.

Results

The backgrounds of the nurses subjects are summarized in Table 1. A total of 141 enrolled nurses, were classified into four age groups. They were 37 nurses (26.2%) aged from 20 to 29 years, 55 (39.0%) from 30 to 39 years, 30 (21.3%) from 40 to 49 years, and 17 (12.1%) from 50 to 59 years. The years of experience in breast cancer nursing were as follows: 63 nurses with years less than 3 years (44.7%), 62 with years ranged from 3 to 7 years (44.0%), and 15 with years over 8 years (15 subjects, 10.6%). Forty-four nurses (31.2%) and 86 (61.0%) worked for outpatients and inpatients, respectively. One-hundred four nurses (77.3%) worked with the medical specialists of breast cancer and 30 nurses (22.7%) did not.

Thirty-five contents and their incidence of eagerness score are shown in Figure 1. The eagerness score of more than 4 was observed on nursing skills at disease notification in 100 nurses (71.4%), chemotherapy in 95 (67.9%), nursing skills for psychological response in 92 (65.7%), nursing skills on palliative care in 91 (65.0%), and nursing skills for patients with recurrence in 89 (63.5%). On the other hand, that of less than 2 was observed on support for sexual activity in 11 nurses (7.9%), nursing skills related to pregnancy and child birth (6.4%), diagnostic imaging in 9 (6.4%), and epidemiology in 8 (5.7%).

We investigated the relationship between

Table 1 Subject's characteristics (n=141)

Characteristics	N (%)
Age (years)	
20-29	37(26.2)
30-39	55(39.0)
40-49	30(21.3)
50-59	17(12.1)
missing	2(1.4)
Nursing workplace	
nurses for outpatients	44(31.2)
nurses for inpatients	86(61.0)
other	9(6.4)
missing	2(1.4)
Last educational institution	
Vocational school of Nursing	116(82.3)
Junior college of Nursing	10(7.1)
University of Nursing	10(7.1)
Graduate school of Nursing	1(0.7)
missing	4(2.8)
Years of nursing experience	
<3	12(8.5)
3-7	34(24.1)
≥8	93(66.0)
missing	2(1.4)
Years of experience in breast cancer nursing	
<3	63(44.7)
3-7	62(44.0)
≥8	15(10.6)
missing	1(0.7)
Presence of working with the medical specialists of breast cancer	
Yes	109(77.3)
No	30(21.3)
missing	2(1.4)
frequency of nursing breast cancer patients	
usually	55(39.0)
often	43(30.5)
sometimes	31(22.0)
rarely	9(6.4)
missing	3(2.1)

the occupational backgrounds of nurses such as years of nursing experience, year of experience in breast cancer nursing, nursing workplace, last educational institution, presence of working with the medical specialists of breast cancer, frequency of nursing breast cancer patients, and the of eagerness score of each content. Years of nursing experience, last educational institution and frequency of

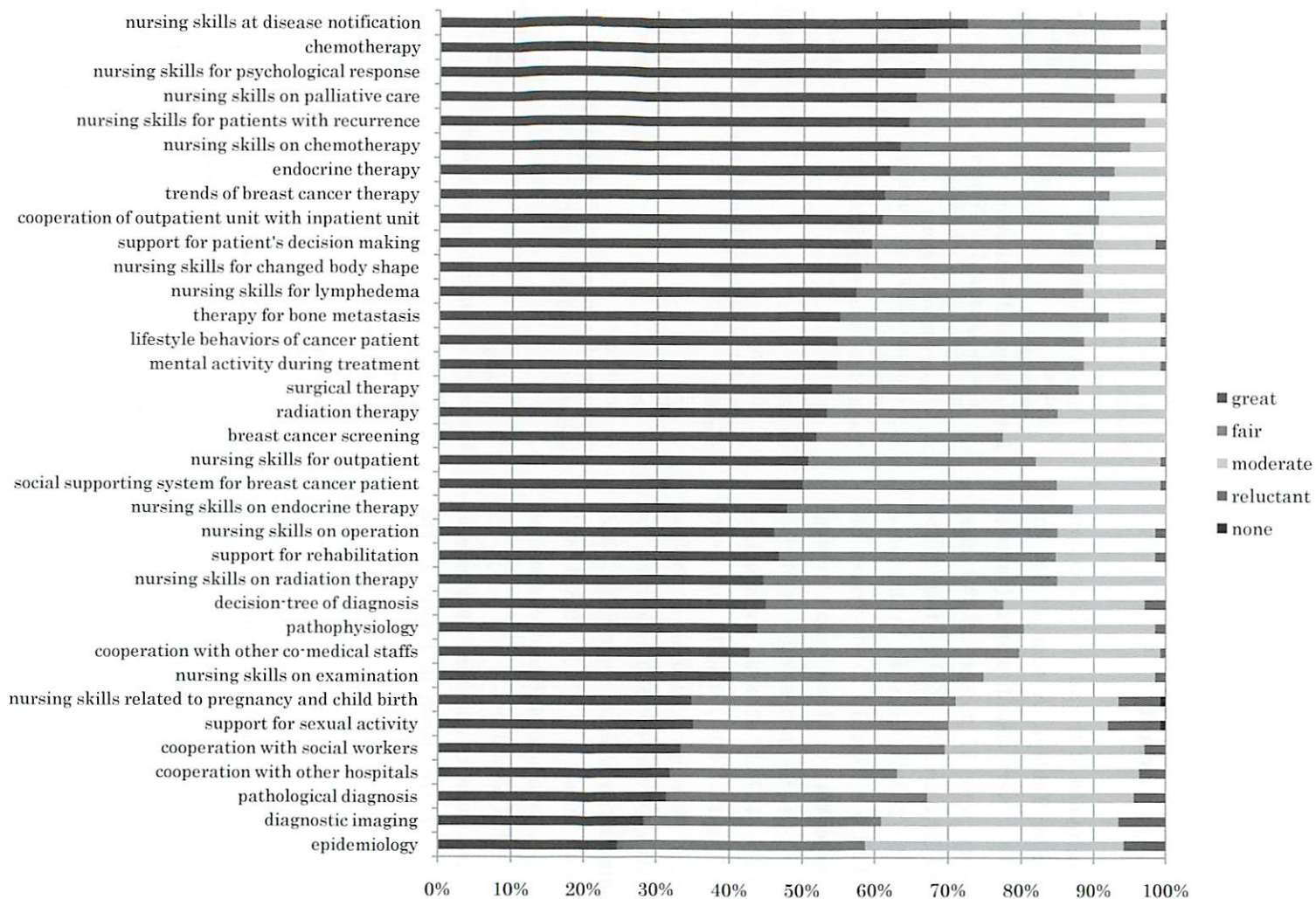


Figure1 The learning need contents about breast cancer nursing

nursing breast cancer patients showed no significant correlation with eagerness score in all contents.

We divided nurses into two groups according to the years of experience in breast cancer nursing as follows; one with 3 and more years and the other with less than 3 years. The eagerness score in the latter was significantly higher than that in the former in the contents of chemotherapy and endocrine therapy ($p < 0.05$). With respect to nursing workplace, the eagerness score of nurses for outpatient showed greater score in contents of chemotherapy and nursing skills for outpatient than those for inpatient ($p < 0.05$). The eagerness score of nurses worked with the medical specialists of breast cancer showed higher score in the nursing skills at disease notification and nursing skills for changed body shape in comparison to those not worked ($p < 0.05$).

Discussion

This study showed that the majority of nurses wanted to learn many contents of breast cancer. Particularly, they showed a highly interests in psychological nursing in the contents concerning palliative care, recurrent patient's care, disease notification. They also wanted to learn the current advances in chemotherapy and endocrine therapy for the breast cancer. It has long been recognized that nursing of psychological distress of breast cancer patients is difficult^{12) 13)}. In spite of the recent progress in medical care, an appropriate nursing care has not been performed in these patients. Generally, breast cancer patients experience a strong impact

when they are informed of disease. Moreover, in case of patients with recurrence, the psychological impact on them is much stronger because it often leads to death¹⁴⁾. Under such circumstances, they are greatly confused at the therapeutic decision-making¹⁵⁾. It has been established in recent nursing skills for cancer patients that psychological nursing for patients with breast cancer must be performed by the nurses with sufficient knowledge of breast cancer. In this study, the majority of nurses wanted to learn many contents of breast cancer nursing. Therefore, relearning of these nurses is effective for the improvement in clinical status of the breast cancer nursing. Furthermore, in patients with advanced stage who complain of, nurses must accept their psychological response and try to relieve their psychological distress. However, it has been reported that some nurses see the patients with terminal stage as incompetent or ugly when they take care of these patients¹⁶⁾. In this study, it has been suggested that many nurses show strong desire to learn nursing skills for patients in their terminal stages because of anxiety or lack of confidence in nursing these patients.

The method of therapy for breast cancer has been chosen on the basis of difference in several hormone receptors, growth markers and others¹¹⁾. Moreover, nurses are occasionally annoyed by combinations, formulae or side effects of new medicines such as those for chemotherapy and endocrine therapy¹⁷⁾. Although the side effects by anticancer drugs introduce severe symptoms to cancer patients, early treatment seems to be more effective. Meanwhile, endocrine therapy is an excellent treatment with its low incidence of severe

Table2 Relationship between contents and subject's background

contents	Years of experience in breast cancer nursing			Nursing workplace			working with the medical specialists of breast cancer		
	<3	≥3		out-Pt.	in-Pt.		yes	no	
	Ave.	Ave.	p-value	Ave.	Ave.	p-value	Ave.	Ave.	p-value
pathophysiology	3.30	3.18	0.364	3.23	3.24	0.994	3.21	3.34	0.399
breast cancer screening	3.25	3.32	0.477	3.26	3.28	0.762	3.24	3.47	0.190
epidemiology	2.85	2.73	0.472	2.82	2.75	0.706	2.78	2.83	0.764
decision-tree of diagnosis	3.30	3.13	0.261	3.27	3.14	0.491	3.23	3.10	0.493
diagnostic imaging	2.98	2.72	0.115	2.95	2.77	0.477	2.85	2.79	0.752
pathological diagnosis	3.07	2.85	0.195	3.02	2.86	0.109	2.93	3.03	0.463
trends of breast cancer therapy	3.65	3.45	0.075	3.64	3.47	0.272	3.55	3.50	0.954
surgical therapy	3.55	3.32	0.053	3.34	3.42	0.269	3.42	3.43	0.851
chemotherapy	3.77	3.54	0.012 *	3.77	3.54	0.012 *	3.63	3.70	0.501
radiation therapy	3.52	3.29	0.097	3.32	3.38	0.080	3.39	3.40	0.850
endocrine therapy	3.66	3.45	0.040 *	3.64	3.46	0.093	3.53	3.60	0.539
therapy for bone metastasis	3.47	3.47	0.961	3.50	3.40	0.080	3.49	3.40	0.608
lifestyle behaviors of cancer patient	3.50	3.36	0.310	3.48	3.36	0.484	3.41	3.47	0.492
mental activity during treatment	3.50	3.36	0.310	3.48	3.35	0.212	3.40	3.50	0.386
nursing skills on examination	3.29	3.03	0.055	3.14	3.14	0.988	3.11	3.27	0.384
nursing skills on operation	3.29	3.30	0.974	3.16	3.35	0.460	3.27	3.40	0.483
nursing skills on chemotherapy	3.61	3.55	0.393	3.68	3.51	0.188	3.59	3.53	0.661
nursing skills on radiation therapy	3.32	3.29	0.830	3.23	3.31	0.240	3.28	3.40	0.427
nursing skills on endocrine therapy	3.35	3.33	0.763	3.36	3.30	0.326	3.35	3.33	0.966
nursing skills on palliative care	3.63	3.53	0.156	3.57	3.55	0.638	3.54	3.70	0.166
nursing skills for patients with recurrence	3.64	3.62	0.958	3.68	3.57	0.188	3.61	3.70	0.464
nursing skills at disease notification	3.72	3.64	0.837	3.70	3.64	0.471	3.63	3.87	0.041 *
support for patient's decision making	3.54	3.42	0.376	3.43	3.51	0.663	3.44	3.60	0.416
nursing skills related to pregnancy and child birth	3.05	2.92	0.435	2.77	3.06	0.168	2.97	3.00	0.982
support for sexual activity	2.98	2.96	0.989	2.75	3.07	0.207	2.93	3.10	0.331
nursing skills for outpatient	3.39	3.25	0.333	3.66	3.12	0.001	3.29	3.40	0.479
nursing skills for lymphedema	3.46	3.46	0.850	3.34	3.48	0.072	3.42	3.60	0.300
nursing skills for changed body shape	3.52	3.41	0.318	3.34	3.48	0.100	3.39	3.70	0.022 *
support for rehabilitation	3.37	3.24	0.325	3.11	3.36	0.179	3.28	3.33	0.753
nursing skills for psychological response	3.67	3.58	0.351	3.66	3.60	0.794	3.59	3.73	0.295
social supporting system for breast cancer patient	3.38	3.32	0.512	3.30	3.35	0.623	3.31	3.47	0.277
cooperation of outpatient unit with inpatient unit	3.52	3.53	0.936	3.64	3.46	0.556	3.50	3.63	0.278
cooperation with other co-medical staffs	3.21	3.24	0.828	3.09	3.2	0.260	3.18	3.40	0.168
cooperation with social workers	3.05	2.97	0.632	2.80	3.12	0.150	3.00	3.03	0.743
cooperation with other hospitals	2.93	2.91	0.875	2.77	2.98	0.421	2.90	3.00	0.498

*p<0.05

adverse effect. Therefore, it is often undergone as the first choice of drug treatment for protection of recurrence or metastasis. In fact, about 70% of breast cancer patients in Japan are subjected to this treatment. The difference in hormonal circumstances of the mammary gland before and after menopause, tend to complicate the way to treat these patients. In this study, it has been shown that many nurses want to learn chemotherapy and endocrine therapy. Higher eagerness score in the contents of endocrine therapy and chemotherapy was found in inexperienced nurses as compared with experienced nurses. Reason of this is considered to be why they have no opportunity to study these treatments. In the future, educational chance must be necessary because of greater learning desire of inexperienced nurses.

On the other hand, the desire of learning nursing skills related to pregnancy and child birth, support for sexual activity, and diagnostic imaging was not particularly strong. It has been reported that the problem associated with sexual activity caused by breast cancer is a matter of primary concern and an important subject in nursing support¹⁸⁾. However, they would accept consultation only when they wish consultation, so that this content is not included in the manual. Additionally, as diagnostic imaging is performed by doctors, this content is not regarded as an important. These demands hardly manifest themselves, even though their importance has been well recognized in recent years. However, this status does not cause any hindrance to the usual nursing.

With respect to difference in workplace in hospital, nurses for outpatient felt the

necessity of learning about chemotherapy and nursing skills for outpatient. The locality in the hospital for treatment such as chemotherapy and radiation therapy has been shifted recently to the clinic from the ward, and then the opportunities to care for patients with chemotherapy and radiation therapy decrease in nurses for inpatients. Therefore, nurses for inpatients may lose interest in chemotherapy and radiation therapy. In this study, nurses for outpatients is not interested especially in contents concerning how to support pregnancy or child birth, how to support for sexual activity and how to cooperate with social workers in comparison with those for inpatient. Due to the reduction of hospitalization period, problems associated with the patients' health emerge more frequently in their daily living than those under hospitalization; nurses for outpatient must recognize the importance of them.

In conclusion, as most of the nurses have a strong motivation to learn about nursing for breast cancer patients, frequent educational chances for them must be considered more properly.

Limitation of this study

The participants in this study were limited to the attendees of nursing seminar. They were not representative of the nurses caring for breast cancer patients, and it is thought the result to the group with high learning need. Further studies are needed in different groups, such as nurses who do not participate in a seminar. Moreover, it is necessary to examine the relation between the learning need and plural factors, such as the type of hospital, the education system in the

hospital, the presence of the nurses certified in cancer nursing, experience of attending seminar.

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