

Need for Patient Education vis-a-vis Implementation Perceived by Cancer Patients and Nurses

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Abstract

In the present study, the need for patient education vis-a-vis implementation perceived by cancer patients and nurses was examined. The participants were 219 patients and nurse at one university hospitals. patients' need for education differed from the importance of patient education perceived by nurses. In addition, differences were found in the perceived implementation of patient education between cancer patients and nurses. These findings suggest that effective nursing interventions should be developed to meet cancer patients' need for nursing, and that hospitals should make efforts to provide places and human resources for multi-disciplinary collaborative patient education programs involving doctors, nurses, dieticians and radiologists.

Keywords: Performance, Need, Cancer, Hospital, Difference

1. Introduction

A leading cause of death in Korea as of 2010 was cancer with the cancer incidence in men and women living up to the age of 81(life expectancy) reported to be 37.5 %(2 in 5) and 34.9%(1 in 3), respectively [1]. Cancer treatments continue to evolve with the increase of cancer incidence rates. In the same vein, patients' need for cancer-related education increases whenever a new treatment option emerges [2]. Patients diagnosed with cancer mostly undergo surgical treatment and radiation therapy, which requires specialized, specific and effective education programs for better outcomes from nursing, socio-psychological and nutritional perspectives [3-7].

Nurses are suitable for providing patient education as they can assess patients better than anyone else [8]. To increase the effects of patient education, it is ideal to establish the need for education perceived by patients, to organize a multidisciplinary team of healthcare staff involved in nursing, to set up and provide a consistent patient education program. On the other hand, the need for education perceived by patients may differ from the importance of education perceived by nurses. Therefore, it is important to square patients' perception with that of nurses. To provide information that helps patients with self-care, nurses should first determine patients' specific need for education and the implementation of education by nursing staff for patients [9-10].

Hence, the present study identifies the importance and implementation of patient education related to cancer treatments perceived by patients in comparison to nurses in order to present some reference data for developing effective and practical education programs benefiting cancer patients receiving chemotherapy [11].

2. Method

2.1. Design

This descriptive survey research concerns cancer patients' need for education and the importance of cancer-related education perceived by nurses in charge of cancer patients, and sheds light on the gap between the perception and implementation of patient education in nursing.

2.2. Subjects

The subjects were diagnosed cancer patients, who were hospitalized for surgery, chemotherapy, radiotherapy or hormone therapy at a general hospital in Busan, and their nurses. With a significance level of 0.05, effect size of 0.40 and power of 0.80 based on G-power 3.1, the minimum number of subjects were 100 cancer patients and 100 nurses. Given a withdrawal rate of 20%, a total of 240 copies of the questionnaire were sent to 120 patients and 120 nurses. Among 226 copies returned, 7 copies with insufficient responses were excluded. Thus, 219 copies were analyzed,

2.3. Data Collection Period and Method

Data were collected from February 2nd to 24th, 2016, following IRB's deliberation and approval (Confirmation No. : 15-0291).

2.4 Data analyses

Collected data were analyzed with SPSS Win 18.0 Program.

- 1) Cancer patients' and nurses' demographics were analyzed based on descriptive statistics.
- 2) Cancer patients' need for education and implementation of patient education by nurses were analyzed based on descriptive statistics.
- 3) Importance of patient education perceived by nurses and their implementation of patient education were analyzed based on descriptive statistics.
- 4) Cancer patients' need for education and implementation of patient education by nurses were analyzed with ANOVA and Wilcoxon.
- 5) Importance of patient education perceived by nurses and their implementation of patient education were analyzed with ANOVA and Wilcoxon.
- 6) Importance of patient education perceived by cancer patients and nurses and nurses' implementation of patient education were analyzed with t-test.

3. Result

3.1. Demographics

3.1.1. Cancer Patients' Demographics

Table 1. Cancer Patients' Demographics (N=103)

Variable	Sub-variable	n(%)	Mean±SD
Age	18-20	1(0.97)	56.50±12.00
	21-30	1(0.97)	
	31-40	8(7.80)	
	41-50	17(16.50)	

	51-60	38(36.89)	
	61-70	28(27.18)	
	71-80	10(9.70)	
Gender	Male	45(43.70)	
	Female	58(56.30)	
Religion	Christianity	12(11.70)	
	Buddhism	40(38.80)	
	Catholicism	5(4.90)	
	None	42(40.80)	
	Etc.	4(3.90)	
Education	None	3(2.90)	3.82±1.00
	Elementary school	8(7.80)	
	Middle school	20(19.40)	
	High school	46(44.70)	
	College +	26(25.20)	
Marital status	Widow/widower	14(13.60)	
	Divorced	6(5.80)	
	Separated	0	
	Single	3(2.90)	
	With a partner	80(77.70)	
	Etc.	0	
Family size			2.95±1.40
Primary care giver	Spouse	53(51.50)	
	Children	23(22.30)	
	Relatives	2(1.90)	
	Friends	0	
	None	22(21.40)	
	Institutionalized	3(2.90)	
Income(Won, monthly)	1) 1M or less	30(29.10)	2.46±1.19
	2) 1M-1.99M	25(24.30)	
	3) 2M-2.99M	19(18.40)	
	4) 3M +	29(28.20)	
Medical expense (Multiple response, n=108)	Self	50(46.30)	
	Spouse	37(34.26)	
	Parents	2(1.85)	
	Children	17(15.74)	
	Etc (siblings & relatives)	2(1.85)	
Family history of	Yes	29(28.20)	

diagnosed cancer	No	74(71.80)	
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Table 2. Cancer Patients' Disease Characteristics (N=103)

Variable	Sub-variable	n(%)	Mean±SD
Diagnosed cancer (Multiple response, n=107)	Colorectal cancer	32(29.91)	
	Gastric cancer	7(6.54)	
	Lung cancer	16(14.95)	
	Bladder cancer	1(0.93)	
	Prostate cancer	1(0.93)	
	Ovarian cancer	2(1.87)	
	Uterine (cervix) cancer	8(7.48)	
	Breast cancer	15(14.02)	
	Etc	25(23.36)	
Time elapsed since cancer diagnosis (months)	1-12months	73(70.87)	13.29±19.02
	13-24months	18(17.48)	
	25-36months	3(2.91)	
	37months +	9(8.74)	
Cancer treatment (Multiple response, n=116)	Surgery	21(18.10)	
	Chemotherapy (medication)	91(78.63)	
	Radiotherapy	4(3.40)	
Hospitalization for chemotherapy	1-10times	78(75.73)	8.80±9.52
	11-20times	13(12.62)	
	21-30times	7(6.80)	
	31-40times	4(3.88)	
	41-50times	1(0.97)	
Stage of cancer	1 st stage	20(19.42)	
	2 nd stage	24(23.30)	
	3 rd stage	28(27.18)	
	4 th stage	21(20.39)	
	No idea	10(9.71)	
Relapse	Yes	19(18.40)	
	No	24(23.30)	
	No idea	60(58.30)	
Diseases other than cancer (Multiple response, n=108)	Hypertension	13(12.04)	
	Diabetes	10(9.26)	
	Arthritis	4(3.70)	
	Cerebrovascular disease	2(1.85)	
	Cardiovascular disease	7(6.48)	
	Respiratory disease	2(1.85)	

	Etc.	10(9.26)	
	None	60(55.56)	
Interest in health	1) Very low	2	3.43±0.82
	2) Low	4	
	3) Average	57	
	4) High	28	
	5) Very high	12	

Table 3. Provision of Disease-related Patient Education (N=103)

Variable	Sub-variable	n(%)
Provision of cancer information (Multiple response, n=266)	Doctor	55(20.68)
	Nurse	34(12.78)
	Other cancer patients	38(14.29)
	Family or relatives	19(7.14)
	Clubs or self-help groups	8(3.01)
	Books	18(6.77)
	Papers and magazines	10(3.76)
	Mass communication, e.g. TV or radio	44(16.54)
	Internet	39(14.66)
	Etc	1(0.38)

3.1.2. Demographics of Nurses

Table 4. Demographics of Nurses (N=116)

Variable	Sub-variable	n(%)	Mean±SD
Age(y.o.)	21-30	82(70.69)	29.92±6.11
	31-40	25(21.55)	
	41-50	8(6.90)	
	51-60	1(0.86)	
Gender	Male	0	
	Female	116(100.00)	
Religion	Christianity	16(13.80)	
	Catholicism	9(7.80)	
	Buddhism	26(22.40)	
	Confucianism	1(0.90)	
	None	64(55.20)	
Education	College graduate	27(23.30)	
	Bachelor's degree	79(68.10)	
	Graduate students	4(3.40)	
	Master's degree and higher	6(5.20)	

Marital status	Single	67(57.80)	
	Married	49(42.20)	
Experience (months)	6-60(5 years or less)	45(38.79)	93.47±75.59
	61-120(10 years or less)	41(35.34)	
	121-180(15 years or less)	14(12.07)	
	181-240(20 years or less)	10(8.62)	
	241-300(25 years or less)	5(4.31)	
	301 +	1(0.86)	
Department	Hemato oncology	17(14.70)	
	Internal medicine	36(31.00)	
	Gynecology	24(20.70)	
	Surgery	32(27.60)	
	Etc	7(6.0)	
Position	Generalist nurse	114(98.30)	
	Clinical nurse specialist	0	
	Nurse in charge of education	1(0.90)	
	Head nurse +	1(0.90)	
Method of patient education (Multiple response, n=128)	Oral presentation	66(51.56)	
	In-house pamphlet	20(15.63)	
	Booklet	37(28.91)	
	Slides or other media	0	
	Video	0	
	Internet	3(2.34)	
	Etc	0	
	None	2(1.56)	
Obstacles in education (Multiple response, n=222)	Time constraint	85(38.29)	
	Lack of educational tools and resources	68(30.63)	
	Patient and carer's lack of understanding	33(14.86)	
	Nurses' lack of knowledge and skills	22(9.91)	
	Nurses' lack of awareness of education	13(5.86)	
	Etc.	1(0.45)	

3.2 Cancer Patients' Need for Education

3.2.1. Need for Education per Domain: Cancer patients' need for education proved high overall, i.e. the need for general patient education, the need for chemotherapy education and the need for radiotherapy education averaged 93.38±12.79(scale range: 22-110), 34.76±5.08(scale range 8-40) and 37.98±3.97(scale range 9-45), respectively. Gaps were found between cancer patients' need for education and the actual patient education implemented in all of the three domains, i.e. general patient education, chemotherapy education and radiotherapy education($p < .001$) (Table 5).

Table 5. Difference between Need for Education and Implementation of Patient Education in Cancer Patients (N=103)

Variable	Mean±SD	Z	p
Need for general patient education	93.38±12.79	-8.55	<.001
Implementation of general patient education	64.54±19.59		
Need for chemotherapy education	34.76±5.08	-8.06	<.001
Implementation of chemotherapy education	24.89±8.04		
Need for radiotherapy education	37.98±3.97	-8.99	<.001
Implementation of radiotherapy education	24.85±5.72		

Nurses perceived the importance of patient education, i.e. the importance of general patient education, chemotherapy education and radiotherapy education, whereas their implementation of patient education varied across the three domains ($p < .001$) (Table 6).

Table 6. Differences between Perceived Importance of Patient Education and Implementation of Patient Education in Nurses (N=116)

Variable	Mean±SD	Z	p
Need for general patient education	90.24±9.12	-9.25	<.001
Implementation of general patient education	64.19±13.18		
Need for chemotherapy education	35.06±4.00	-8.41	<.001
Implementation of chemotherapy education	28.36±5.72		
Need for radiotherapy education	38.69±4.78	-9.33	<.001
Implementation of radiotherapy education	25.14±8.81		

Cancer patients' need for education differed from the importance of patient education perceived by nurses (general patient education $p < .03$). Also, difference was found between the perceived importance of patient education and the implementation of patient education ($p < .001$).

Table 7. Differences between Need for Patient education and Implementation of Patient Education in Cancer Patients and Nurses (N=219)

Variable	Patients(n=103)	Nurses(n=116)	t	p
	Mean±SD	Mean±SD		
Need for general patient education	93.38±12.79	90.24±9.12	2.11	0.03
Need for chemotherapy education	34.76±5.08	35.06±4.00	-0.49	0.62
Need for radiotherapy education	37.98±3.97	38.69±4.78	-1.19	0.23
Implementation of general patient education	64.54±19.59	65.19±13.18	-0.29	0.77

Implementation of chemotherapy education	24.89±8.04	28.36±5.72	-3.72	<.001
Implementation of radiotherapy education	24.85±5.72	25.14±8.81	-0.28	0.78

4. Conclusion

The present findings highlighted the strong need for nursing in cancer patients in comparison to the low level of implementation of patient education. Also, patients' need for education differed from the importance of patient education perceived by nurses. In addition, differences were found in the perceived implementation of patient education between cancer patients and nurses. These findings suggest that effective nursing interventions should be developed to meet cancer patients' need for nursing, and that hospitals should make efforts to provide places and human resources for multi-disciplinary collaborative patient education programs involving doctors, nurses, dieticians and radiologists.

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