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## Needs of Ambulatory Patients With Cancer Who Visited Outpatient Units in Japanese Hospitals

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**Purpose/Objectives:** To document the domains and properties of the self-reported needs of ambulatory patients with cancer.

**Design:** Descriptive.

**Setting:** Outpatient units in three general hospitals in Japan.

**Sample:** 139 ambulatory patients with cancer.

**Methods:** The data were collected using questionnaires. Five theoretical groups, which were composed of 30 items, were extracted empirically as domains. Alpha coefficients for each domain ranged from 0.70–0.89. Relationships between each domain and other variables and among the domains themselves were examined.

**Main Research Variables:** Expressed needs of ambulatory patients with cancer, their backgrounds, medical and treatment characteristics, and physical functioning.

**Findings:** All domains for patient needs, except for healthcare needs, were negatively correlated with the level of their physical function. Emotional, physical, and functional needs were positively correlated with the frequency of visiting an outpatient unit. Compared with other needs, adaptation needs were greater for patients who were employed or within three months of discharge. Among patients with one of three cancer sites (i.e., breast, stomach, and colorectal cancers), the needs for individualized care were the lowest for patients with colorectal cancer and highest for patients with breast cancer.

**Conclusions:** From the needs that ambulatory patients with cancer expressed, five domains were derived. Those domains had relationships with other variables.

**Implications for Nursing:** The findings shed light on a segment of ambulatory cancer nursing and may be useful when developing and testing programs needed in the future.

### Key Points . . .

- ▶ Ongoing and emergent needs of Japanese patients with cancer essentially are undocumented in the literature.
- ▶ If the goals of services and education are incongruent with the concerns and demands of would-be recipients, those services and educational materials may not be accepted.
- ▶ Instead of assessing patients' needs from a healthcare provider's frame of reference, ask direct questions such as, "What kind of problems or burdens do you have?" and "What do you want, need, or use in trying to attain and maintain your well-being?"

mortality rate from lung cancer. Among women, mortality resulting from lung, colorectal, hepatic, and breast cancers follows mortality from stomach cancer. Plans to reduce the length of stay in hospitals in Japan are being developed as in other countries.

Although most scientists and healthcare providers now recognize the need for it, the incidence of cancer diagnoses throughout Japan has not been documented formally. Many Japanese patients with cancer are not informed of the true nature of their illness; however, the rate at which patients'

The incidence of cancer death in Japan in 2002 was 304,286, with a mortality rate of 241.5 per 100,000 (Health and Welfare Statistics Association, 2004). These statistics indicate that more than a third of the Japanese population succumbs to cancer. Since 1993, the leading cause of cancer death in Japan has been lung cancer in men and gastric cancer in women. The death rate per 100,000 in 2001 was 66.8 and 27.0 respectively, for men and women (Health and Welfare Statistics Association). Among men, mortality from gastric, hepatic, and colorectal cancers follows the high

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cancer diagnoses are being divulged is increasing gradually. According to an opinion survey in 2002 (Asahi Shimbun Sougou Kenkyu Center, 2002), 77% of 2,060 Japanese citizens expressed a desire to know about the cancer when it was diagnosed and 56% reported that physicians should tell patients about a cancer diagnosis.

In the outpatient departments of Japanese general hospitals, healthcare providers encounter patients with various cancers whose ongoing and emergent needs essentially are undocumented in the literature. One of the best ways to provide care that meets the needs of patients is to have an accurate and complete assessment that also focuses on important patient cues (Murray & Atkinson, 2000). A needs assessment is the first step in planning ambulatory care nursing interventions and programs (Hackbarth, 2001) because designing programs that nobody wants, needs, or will use is nonproductive.

Nurses in ambulatory care should be able to assess inclusively what they deem necessary, desirable, or useful for their patients. However, nurses may have difficulty adequately estimating patients' needs. According to a qualitative study about the psychosocial needs of patients with cancer, patients and hospital caregivers rank patient needs differently (Bunston & Mings, 1995). The needs include, but are not limited to, family adjustment, interactions with the healthcare system, stigmas, informational needs, sexuality, and preservation of a normal lifestyle. Researchers have found that patients have more needs in the areas of personal care, activity management, and interpersonal interaction than the patients' families had expected (Longman, Atwood, Sherman, Benedict, & Shang, 1992). Even patients' families may underestimate some domains of need for the care of home-based patients with cancer.

Nursing services should be delivered to patients who actually need them in a manner befitting their ideas and lifestyle. If the goals of the services and education are incongruent with the concerns and demands of would-be recipients, those services and educational materials may not be accepted. Patients' concerns and demands about health problems must be understood so that the most appropriate programs and services can be developed.

According to a survey on healthcare-seeking behavior conducted among 113,980 ambulatory patients at 639 medical facilities throughout Japan (Statistics and Information Department at Minister's Secretariat on Ministry of Health, Labor, and Welfare, 2001), 53% of all respondents stated that they generally were satisfied, including "somewhat satisfied," with their hospitals, whereas only 6% expressed dissatisfaction. Similar responses were obtained about specific items, such as details of consultation and treatment, physicians' responses to questions or consultation with physicians, and nurses' or other personnel's responses to questions and consultation. However, this survey inquired only about the level of patients' satisfaction in predetermined, limited areas and failed to fully describe the needs that patients might have had. Instead of assessing the patients' needs from the healthcare providers' frame of reference, direct questions should be asked such as, "What kind of problems or burdens do you have?" and "What do you want, need, or use in trying to attain and maintain your well-being?"

Japanese patients do not readily express their desires or make demands, especially from physicians, even when they recognize the need for healthcare education, medical informa-

tion, and psychological support. Some patients, particularly older adults, seem to believe that making any demands on physicians is improper. Many may express their desires or demands to healthcare providers if they are urged to do so, but actions never are taken on their own accord. Many healthcare providers do not know what to ask or how to approach patients with cancer who visit healthcare facilities for treatment. Although healthcare professionals are familiar with the therapeutic protocols and symptom characteristics of ambulatory patients, they may be ignorant of the needs or concerns of the latter related to improving their patients' psychological quality of life. Therefore, an examination of the domains of need among patients with cancer, as well as their association with patients' backgrounds or characteristics, will provide valuable information from which to develop needed programs and services.

## Conceptual Framework

Without knowing the expressed needs of an individual, teaching the patient or family about his or her illness and self-care might not be effective. The needs uncovered in this study are from patients who had received a diagnosis of cancer, which brought on stressful experiences.

In general, a person experiences a stressful situation when he or she construes a demand as taxing, exceeding available resources, or threatening to well-being (Lazarus & Folkman, 1984). During this time, the individual will make cognitive and behavioral efforts to manage, reduce, or tolerate the demands created by the stressful experience. This combined effort is referred to as coping (Lazarus & Folkman). If the patient with cancer does make such an effort, he or she also will experience needs that arise because of various coping tasks necessitated by the diagnosis and resultant treatment.

A person tries to cope with a situation by using internal and external resources. Antonovsky (1987) stressed the significance of focusing on coping resources in the context of one's health rather than on the stressor. The coping resources of the individual will facilitate active adaptation to the environment. Ambulatory patients with cancer need professional support that can act as an external resource to aid in solving their healthcare problems. This demand for professional support also is one of the dimensions of need in this study.

## Research Questions

This study addressed the following questions: (a) What are the expressed needs of ambulatory patients with cancer? (b) Are domains for needs related to the backgrounds or the medical and treatment characteristics of these patients? (c) What are the relationships between the patient's level of physical functioning and these domains? and (d) How do the needs domains relate to each other?

## Methods

### Procedures

In this descriptive study, ambulatory patients older than the age of 20 were recruited at outpatient units for digestive diseases or breast cancer in three general hospitals in Japan. The patients who had not been informed of their true diagnoses (despite having cancer) were treated in outpatient units with

other patients with and without cancer. To take into account those patients who were not advised of their true diagnoses, those eligible to participate were not restricted to patients with cancer. All patients who visited the outpatient units were included. Nurses in the hospitals gave the participants an account of the survey and handed them a copy of the questionnaire and a cover sheet that explained the aim of the survey and the rights of the participants. The survey began in October 2001 and ended when 150 questionnaires had been distributed to voluntary participants at each hospital. The questionnaires were completed and mailed back anonymously. The person responsible for this study had charge of all of the data. Prior to data collection, the study was approved by the research ethics committee of the institution with which the authors are affiliated as well as by the hospitals where the surveys were distributed.

## Questionnaire

The questionnaire consisted of three parts: (a) needs of ambulatory patients with cancer, (b) their physical functioning, and (c) disease category, treatment, and demographic data. The content domains of the questionnaire were generated through active discussions among four researchers and four associates who had more than 15 years of experience in oncology nursing. The discussion was carried out from three points of view: physical, psychosocial, and interpersonal problems; coping tasks necessitated by cancer diagnosis and treatment; and demands for professional support. The Supportive Care Needs Survey (Bonevski et al., 2000; Sanson-Fisher et al., 2000; Steginga et al., 2001) was referred to during the process. A number of differences are apparent between that questionnaire and the survey used in this study: The questionnaire used in this study asked about psychosocial problems by using phrases that were consistent with the way in which the Japanese express their emotions and had several original needs items (e.g., items concerning support of interpersonal relationships). In addition, some resources of support available to Japanese patients were different. Items were formatted with five-point Likert response options that ranged from 1 (strongly agree) to 5 (strongly disagree). A preliminary questionnaire, pilot tested on 15 people, was revised based on the results. The final questionnaire contained 68 items. Examples of items from each section of the questionnaire are presented in Figure 1. The total possible score was 160 for physical, psychosocial, and interpersonal problems; 70 for coping tasks; and 110 for demands for professional support. A higher score indicates more need.

The Medical Outcomes Study (MOS) Physical Functioning Measure (Stewart & Kamberg, 1992) was translated into Japanese and used to measure the physical functioning of the respondents. The physical functioning measure included 10 items, satisfaction with physical capability had one item, and mobility consisted of two items. The internal consistency was 0.92 for the 10 items about physical functioning and 0.71 for the two-item mobility scale (Stewart & Kamberg). The score was transformed to a 0–100 scale, with a high score reflecting better functioning.

Study participants were asked to enter their disease entity in brackets on the questionnaire. The respondents' reports of their diagnoses and other information about disease, treatment, and demography were used as indicators of disease and treatment status.

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1. Physical, psychosocial, and interpersonal problems
    - Physical problems (11 items)
      - I feel pain.
      - I suffer from diarrhea or constipation.
    - Psychosocial problems (14 items)
      - I was confused by why this has happened to me.
      - I fear that I will have a relapse.
    - Interpersonal problems (7 items)
      - I can't speak frankly to other people about my illness.
      - I am concerned about the ability of those close to me to cope with caring for me.

**Total possible score: 160**
  2. Coping tasks necessitated by the cancer diagnosis and resultant treatment (14 items)
    - I have to change my usual routine and way of living.
    - I can't accept the changes in my body.

**Total possible score: 70**
  3. Demands for professional support
    - Information (8 items)
      - I want to be informed of the results of my examination.
      - I want information about the most up-to-date treatment.
    - Coordinating interpersonal relationships (6 items)
      - I want a nurse to act as a mediator among my physician, my family, and me.
      - I hope hospital staff members are considerate of my family.
    - Health system (8 items)
      - I want the hospital staff to attend promptly to my physical needs.
      - I want to see a doctor and enter the hospital immediately, when necessary.

**Total possible score: 110**

**Total possible score for all sections of the questionnaire: 340**

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**Figure 1. Sample Items From Each Section of the Questionnaire**

## Results

### Sample Characteristics

A total of 450 questionnaires were distributed and 278 were returned by mail (62%); 139 respondents reported a cancer diagnosis. The remaining 139 were not included in this analysis because the patients did not record a cancer diagnosis on the questionnaire.

The average age of the respondents was 60.59 years (SD = 11.11); 51% were men, and 49% were women. Eighty percent were married. On average, the respondents had been ill for 38.01 months (SD = 50.54); 32% had colorectal cancer, 22% breast cancer, 20% gastric cancer, and 26% other conditions (e.g., cancers of the pancreas or esophagus) (see Table 1). Among the three participating hospitals, no significant differences were found in cancer sites, therapeutic modalities administered, or demography.

The average MOS score for physical functioning was 76.6 (SD = 23.5), the score for satisfaction with physical ability was 55.2 (SD = 23.0), and the mobility score was 92.4 (SD = 14.3). These scores generally agreed with those obtained by Stewart and Kamberg (1992), who evaluated participants in an outpatient clinic in an urban setting and a rural health clinic (73.2, SD = 26.4; 61.0, SD = 25.8; and 93.3, SD = 16.1, respectively), with the exception of the score for satisfaction with physical ability.

**Table 1. Sample Characteristics**

Variable	n	%
<b>Age (years)</b>		
$\bar{X}$ = 60.59	–	–
SD = 11.11	–	–
<b>Gender (N = 139)</b>		
Male	71	51
Female	68	49
<b>Marital status (N = 138)</b>		
Married	111	80
Single	27	20
<b>Living arrangements (N = 136)</b>		
Lives with family	126	93
Lives alone	10	7
<b>Caregiver (N = 135)</b>		
Spouse	88	65
Other	47	35
<b>Employment (N = 130)</b>		
Employed	67	52
Unemployed	63	48
<b>Cancer type (N = 139)</b>		
Colorectal	44	32
Gastric	28	20
Breast	31	22
Other	36	26
<b>Months since diagnosis</b>		
$\bar{X}$ = 38.01	–	–
SD = 50.54	–	–
<b>Months since discharge (N = 135)</b>		
Less than three	34	25
More than three	101	75
<b>Reason for seeing a doctor (N = 128)</b>		
Treatment	68	53
Follow-up	60	47
<b>Attending hospital (N = 139)</b>		
A	45	32
B	30	22
C	64	46
<b>Number of times visited an outpatient clinic</b>		
$\bar{X}$ = 26.00	–	–
SD = 50.43	–	–

## Expressed Needs of Ambulatory Patients With Cancer

Conceptually related items were grouped by analyzing the patients' responses to the questionnaires. Five theoretical groups were hypothesized as domains for the needs of ambulatory patients with cancer. First, based on central tendency and variability, the items with outliers in the distribution of the scores were eliminated from the questionnaires. Then, the items with contents that were related conceptually to each other were grouped. For every pair of items in each group, bivariate correlational analyses were repeated. When the nature of the linear relationship was negative or the magnitude of the linear relationship was comparatively weak, one of the pair was deleted. In the end, the 35 remaining items comprised five groups that were conceptually named emotional needs, adaptation needs, physical and functional needs, needs for individualized care, and healthcare needs.

In the next step, two researchers, who were specialists in oncology nursing and introduced to these theoretical groups

for the first time, engaged in the process of content or consensual validation. By using a three-point scale (0, 1, or 2), they examined whether each item in every hypothesized theoretical group had a high likelihood of documenting the patients' functions correctly. Both researchers assigned two points (the highest score) to 29 of 35 items and one point to 6 items. No items received a score of zero. Items that were assigned two points were retained in the analysis, and items that were assigned one point were evaluated further by the expert panel. Although the items captured important aspects of the patients' functions, some improvement was required. Five of these items were deleted, but the remaining item was considered very important and therefore retained. Consequently, five theoretical groups or subscales composed of 30 items each were used in the analyses (see Table 2). Internal consistency of each subscale ranged from alpha 0.70–0.89.

## Characteristics of Items Included in Each Theoretical Group

Emotional needs (10 items) focused on the patients' emotional distress and were measured with items such as "I fear becoming dependent on others in performing my daily activities," "I am worried about what the future holds for me," and "I am confused about why this happened to me." The mean of each item included in this theoretical group was generally higher (2.59–3.27) than for the items included in adaptation needs and physical and functional needs. Higher mean and median scores for an item indicate that a larger number of the study's sample reported that it was a current concern for them. However, the highest mode score was one on a five-point scale for three items: "I fear death and dying," "I fear pain," and "I am anxious without any specific reason." That is, a number of respondents reported that the items did not concern them currently.

Adaptation needs, composed of four items, focused on whether patients with cancer needed to cope with new demands posed by their disease. The four items were "I can't accept changes in my body," "I am forced to change my routine and way of living," "I have to adjust my social life so as to continue my treatment," and "I can't speak frankly to other people about my illness."

Physical and functional needs included five items that pertained to physical symptoms and performance in daily activities. Although four items (i.e., "I suffer from diarrhea or constipation," "I can't sleep well," "I feel pain," and "My activities of daily life are restricted") had relatively low mean scores, a high score was assigned to the item "I lack energy or feel tired." The mean for this item (2.79) was higher than for the other four items.

Needs for individualized care incorporated five items and were concerned with seeking healthcare professionals for treatment that is customized for a particular affliction, situation, and condition. The means of each item included in this subscale were somewhat high ( $\bar{X}$  = 2.67–3.55, median = 3 or 4). The highest mean scores were for "I want the hospital staff to promptly attend to my physical needs" and "I want to be treated like a person, not just another case." The group also included items pertaining to responses to the patients' families and to the nurse's role, such as "I hope hospital staff members are kind to and considerate of my family" and "I want a nurse to act as a mediator among my physician, my family, and me."

**Table 2. Characteristics of Items Included in Each Theoretical Group**

Theoretical Groups and Items	$\bar{X}$	SD	Median	Mode
<b>Emotional needs (10 items, alpha = 0.89)</b>				
I am anxious without any specific reason.	2.59	1.33	3	1
I fear becoming dependent on others in performing my daily activities.	3.01	1.48	3	4
I fear that my body will get worse or weaken.	2.96	1.39	3	4
I worry that the results of the treatment will be beyond my control.	2.85	1.36	3	4
I am worried about what the future holds for me.	3.27	1.33	4	4
I am in constant anxiety about having any treatment.	2.59	1.32	3	4
I fear death and dying.	2.76	1.31	3	1
I fear pain.	2.62	1.39	3	1
I am lonely and sad.	2.66	1.30	3	4
I am confused about why this happened to me.	3.18	1.37	4	4
<b>Adaptation needs (4 items, alpha = 0.70)</b>				
I can't speak frankly to other people about my illness.	2.30	1.18	2	1
I can't accept changes in my body.	2.45	1.20	2	1
I am forced to change my routine and way of living.	2.46	1.32	2	1
I have to adjust my social life so as to continue treatment.	2.60	1.43	2	1
<b>Physical and functional needs (5 items, alpha = 0.75)</b>				
My activities of daily life (housework, shopping, commuting, etc.) are restricted.	2.30	1.39	2	1
I lack energy and am tired.	2.79	1.30	3	4
I can't sleep well.	2.37	1.32	2	1
I feel pain.	2.32	1.36	2	1
I suffer from diarrhea or constipation.	2.45	1.38	2	1
<b>Needs for individualized care (5 items, alpha = 0.81)</b>				
I hope hospital staff members are kind to and considerate of my family.	2.67	1.26	3	3
I want the hospital staff to promptly attend to my physical needs.	3.55	1.42	4	5
I want a nurse to act as a mediator among my physician, my family, and me.	2.86	1.35	3	4
I want to take the advice of a specialist in counseling or social work.	2.79	1.36	3	1
I want to be treated like a person, not just another case.	3.33	1.40	4	5
<b>Healthcare needs (6 items, alpha = 0.78)</b>				
I want to decide whether I go in for tests or treatment.	2.77	1.40	3	1
I want to choose my medical care based on my needs.	3.22	1.39	3	4
I want information (written, diagrams, drawings) about all aspects of managing my illness and side effects at home.	3.57	1.36	4	5
I want information about a group that supports my recuperation in a different way than medical treatment.	2.74	1.35	3	3
I want to get information on predictable marital relationship problems and coping strategies.	2.56	1.33	3	1
I want to talk to someone who understands how I feel and has been through a similar experience.	3.43	1.29	4	4

N = 139

Healthcare needs consisted of six items and focused on the desire to be involved in one's own health care. This category was typified by items such as "I want to decide whether I go in for specific tests or treatment." In the same category, the patients demanded information and human resources that were needed to practice self-care (e.g., "I want information about all aspects of managing my illness and side effects at home," "I want to talk to someone who understands how I feel and has been through a similar experience"). Just as with the need for individualized care, the needs for this group were high, as shown by means ranging from 2.56–3.57.

### Relationship to Patients' Background and Characteristics

T tests were used to examine the differences among the theoretical groups or subscales in relation to gender differences, occupational status, time elapsed since hospital discharge (more or less than three months), and treatment status. Analysis of variance was used to examine differences caused by the anatomic sites affected by cancer (see Table 3). The adaptation needs were higher for patients who were employed at the time of the survey when compared to those who were unemployed

and for those within three months of discharge than those who had been outpatients for three months or more. In the category of physical and functional needs, a significant difference existed between patients in active treatment and those in follow-up care after treatment was completed. The need for individualized care was higher in women than in men. In the same category, a comparison across those grouped by cancer site revealed that the mean scores for breast cancer were the highest and mean scores for colorectal cancer were the lowest.

The relationship between each theoretical group and the patient's age or frequency of visiting an outpatient unit was evaluated using Pearson's product-moment correlation. The emotional needs and physical and functional needs were positively correlated with the frequency of visiting the outpatient unit ( $r = 0.20, p < 0.05$ ;  $r = 0.22, p < 0.05$ , respectively). None of the theoretical groups was correlated with age. No association was found between healthcare needs and the patients' background and medical characteristics.

### Relationship With Patients' Physical Functions

The relationship between patients' expressed needs and their physical function was assessed by Pearson's correlation

**Table 3. Association With Background and Characteristics**

Theoretical Group Needs	Men + Women (N = 139)	Employed + Unemployed (N = 130)	More or Less Than Three Months Postdischarge (N = 135)	Treatment + Follow-Up (N = 128)	Colorectal + Gastric + Breast Cancers (N = 103)
Emotional	—	—	—	—	—
Adaptation	—	t = 2.02**	t = 2.00*	—	—
Physical and functional	—	—	—	t = 2.80***	—
Individualized care	t = -1.82*	—	—	—	F = 3.19** (df = 2)
Health care	—	—	—	—	—

\* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01

analysis. The MOS scale, which consisted of three sets of subscales (i.e., a physical function measure, satisfaction with physical capability, and mobility), was used as an index for patients' physical functions. Except for healthcare needs, each theoretical group or subscale for needs was negatively correlated with all subscales of the MOS scale ( $r = -0.22$  to  $-0.55$ ,  $p < 0.05$ ). Healthcare needs were negatively correlated only with satisfaction with physical ability ( $r = -0.25$ ,  $p < 0.01$ ).

### Relationships Among Theoretical Groups

Bivariate correlations were examined for all combinations of the five theoretical groups (see Table 4). A strong correlation was noted for all combinations. In particular, the emotional needs showed a strong correlation coefficient of 0.61 or more with all four of the other theoretical groups. Also, the correlation between needs for individualized care and healthcare needs was strong ( $r = 0.69$ ). The weakest correlation coefficient was 0.36 for the combination of physical and functional needs and healthcare needs.

## Discussion

An analysis of the expressed needs of ambulatory patients with cancer indicated that five key domains of need exist. The relationships among the domains, patient characteristics, and diagnostic groups suggest that nursing and supportive care programs are needed for these unique populations.

The physical and functional needs were significantly greater for patients under treatment than for those currently under observation. However, except for a lack of energy or a feeling of constant fatigue, the scores (mean, median, and mode) for all of the items included in this domain were low. Compared to a study that evaluated participants after surgery for colon cancer (Galloway & Graydon, 1996), the symptom distress scores among patients in the current study were in the

low range, with fatigue being the most distressing symptom. Cancer fatigue generally is not relieved by rest, and 72%–99% of individuals with cancer complain of fatigue during the course of their disease and treatment (McDaniel & Rhodes, 2000). The physical and functional needs of patients undergoing treatment presumably are important to satisfy, but the imminent concern prevalent among ambulatory patients with cancer was fatigue.

Adaptation needs included items related to the difficulty of accepting physical changes, disclosing the illness to others, and the need to change one's way of living and adjusting one's social life to meet the demands of a particular therapeutic regimen. Patients with highly expressed needs in this domain clearly recognized some difficulties posed by their cancer and the need to change their lifestyles. In a study about adaptation to chronic illness, Pollock (1993) found that the perceived level of disability caused by a chronic illness was related positively to psychosocial adaptation. When patients with cancer adapt to the cancer experience, their recognition of the difficulty posed by the cancer may be significant. Effective healthcare education may motivate afflicted people to change behaviors to be conducive to optimal health. Compared with the other needs, adaptation needs were greater for patients who were employed and within three months of being discharged from the hospital. Clearly, if a group of similar patients is targeted and if a healthcare education program focusing on the domain of adaptation needs is developed and provided, the probability of effectiveness is higher.

The needs for the individualized care category were comprised of items about asking healthcare professionals for treatment that is customized for a particular affliction, situation, or condition. The scores were higher among women. When comparing the three cancer sites, the scores for this domain for patients with colorectal cancer were the lowest and for patients with breast cancer were the highest. Gender differences may exist in the psychological response to cancer (Anastasia & Carroll-Johnson, 1998), which may explain why patients with breast cancer placed the greatest emphasis on the needs in this domain. However, gender differences cannot explain why, among the three cancer sites, patients with colorectal cancer expressed the lowest needs for this domain. In their study about the psychosocial needs of patients with cancer, McIllmurray et al. (2001) verified that patients with colorectal cancer, when compared to those with other tumor types (e.g., breast cancer, lymphoma, lung cancer), showed a significantly lower level of need for healthcare professionals. Some peculiar factors may exist that reduce the needs for individualized care among this group of patients.

**Table 4. Correlation Coefficients Between Theoretical Groups**

Theoretical Group Needs	A	B	C	D	E
A. Emotional	1.00	0.71*	0.61*	0.73*	0.61*
B. Adaptation			0.56*	0.49*	0.46*
C. Physical and functional				0.43*	0.36*
D. Individualized care					0.69*
E. Health care					1.00

N = 139

\* p = 0.01

Healthcare needs had no statistical association with the patients' physical function, background, or treatment status; however, the scores on all items in this domain were high when compared with the other domains. Healthcare needs were comprised of items concerned with making healthcare decisions for oneself and demanding information and human resources to practice self-care. Many respondents expressed a strong desire for constructive health care, independent of their background and physical function, while experiencing the hardship of cancer. This may be a finding worthy of note in developing support for ambulatory patients with cancer.

The average scores for the items included in emotional needs were as high as those for healthcare needs, but unlike the latter, the former correlated significantly with the level of physical functioning. Also, emotional needs were correlated most closely with the other domains. Greenberg (2002) noted that people become aware of what they need when undergoing pain or suffering. When patients undergo physical pain and become acutely aware of their emotional needs, they may recognize other needs. Because the mind and body are interrelated, the effects of each are synergistic and mutually dependent (Benner & Wrubel, 1989). In planning interventions to meet the emotional needs of ambulatory patients with cancer, a systematic approach to providing support may be important to develop, as well as giving careful consideration to the relationship between this and other domains.

## Implications for Nursing

Study findings can be put to good use when making needs assessments for ambulatory patients with cancer. In general, patients in this study strongly expressed not only emotional needs, implying emotional distress, but also manifested an interest in healthcare needs, implying an intention to achieve

better health. These needs were expressed regardless of the patients' background and physical condition. The degree to which patients expressed a need for individualized care, implying a desire for customized support, differed depending on gender or cancer site. Although a support program to satisfy healthcare needs is acceptable to many patients, it may need to be designed differently for certain individuals, depending on whether a patient chooses to seek support to satisfy the need for individualized care. When developing an effective support program, the characteristics of each patient seeking individualized care should be clarified expressly.

This study suggested that a healthcare education program focusing on adaptation needs would be effective for patients who were employed or within three months of discharge. However, the heterogeneity of the cancer sites and small sample size posed some limitations in generalizing the results. In addition, the questionnaire should be studied further to test its validity and reliability. Furthermore, the participants in this study were limited to those who were aware that they were suffering from cancer. Currently in Japan, patients with cancer are not necessarily informed of their medical diagnoses; therefore, the findings from this study may not apply to a general population of affected patients. Nevertheless, these findings shed light on one aspect of nursing care for ambulatory patients with cancer. The next study—to target ambulatory patients with cancer who are afflicted with a particular cancer (i.e., colorectal cancer) who have been newly discharged and to clarify the characteristics of adaptation needs for patients—is being planned.

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