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The Relationship between Meaning of Illness, Anxiety Depression, and Quality of Life for Cancer Patients

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A B S T R A C T

The aim of this descriptive study was to determine the relationship between meaning of illness, anxiety, depression, and quality of life of patients receiving chemotherapy. Inclusion of the study consists of 110 patients with cancer who applied to the inpatient unit of a medical oncology clinic from 01 December 2005 to 31 May 2006 to receive inpatient chemotherapy. The research sampling comprises of 110 patients who were hospitalized at the medical oncology clinic of the university hospital and who received chemotherapy for at least 6 months. Hospital Anxiety and Depression Scale (HAD), Meaning of Illness Questionnaire (MIQ) and Quality of Life Scale were utilized to collect data. The results of the correlation analysis revealed a statistically significant relationship between meaning of illness, anxiety, depression, and quality of life ($p<0.01$). Positive meaning of the illness increases the quality of life score average and reduces anxiety and depression. The results indicated that meaning of illness affects anxiety, depression, and quality of life. Nurses should offer opportunities for patients to search the positive meaning in the cancer illness.

***Key words**: cancer, meaning of illness, anxiety, depression, quality of life, nursing*

Introduction

Cancer is a disease creating serious stress on patients and their families from diagnosis to the terminal stage, as well as disturbing balance and compliance[1,2]. According to the data presented by the World Health Organization, approximately 12.4 million people were diagnosed with some form of cancer and 7.6 million people died because of this disease all over the world in 2008. The estimation is that this number will increase two times by 2020 and almost three times by 2030. More than 70% of all cancer death cases was determined to have occurred in underdeveloped and developing countries. The cancer, burden of which has gradually been increasing in these countries, threatens to leave a heavy burden of disease, death and economic cost on these countries in the next 20 years[3]. The cancer report prepared in Turkey in 2006 indicated that 33.419 cancer cases were registered in 2003 and the number of cancer patients increased rapidly in comparison with previous years[4]. Besides a sense of loss, despair, anxiety, anger, fear and similar problems, being diagnosed with cancer brings along psycho-social problems like social isolation, role reversal, job quit, and economic problems. Affecting the cancer patient and his/her family, the psycho-social problems have an effect on the individual's quality of life, as well[2].

Some studies demonstrated a close relationship between cancer patients' quality of life and psychological stress[5,6]. It is a known fact that anxiety and depression cause mental damage in cancer patients, which influences the prognosis adversely[1]. The most-commonly observed psychological disorder in cancer patients is depression[5–11].

The meaning given to an illness is shaped by the individual's life experiences and includes cultural, spiritual, psychosocial, biologic, and economic factors. The meaning of the disease affects the duration and result of the disease. Therefore, it is important to assess how the illness is meant by patients[12]. Some studies conducted in our country revealed that the illness is perceived as a case to be fought against and which creates a sense of guilt[13].

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Furthermore, studies carried out by Büssing and Fischer, and Degner et al., proved that positive meaning of the illness reduces anxiety and depression rates while increasing the quality of life[14,15]. Previously conducted studies have shown that illness meaning is closely associated with the psychological problems experienced by the patient. It is necessary to establish an understanding of the relationships between meaning of the illness, anxiety, depression, and quality of life factors in cancer patients. This will provide direction for effective nursing interventions to enhance the patients' ability to successfully manage the cancer experience. In our country, the number of studies on the meaning of illness of cancer patients is limited. Aim of this study was to determine relationship between meaning of illness, anxiety, depression and quality of life of patients receiving chemotherapy.

Material and Method

This study included 110 patients with cancer who applied to the inpatient unit of a medical oncology clinic to receive chemotherapy between 01 December 2005 and 31 May 2006. 110 patients, who met the sampling criteria among 148 patients hospitalized at the Medical Oncology Clinic between 01 December and 31 May, were included in the study; 5 patients were excluded from the study because they rejected to be interviewed, 12 patients were excluded due to lack of sufficient communication, and 21 patients were excluded because they failed to meet the sampling criteria. The study was conducted in a large hospital in eastern part of Turkey and with almost all the patients with cancer who lived in this region especially in the vicinity of Erzurum and who received cancer treatment in that hospital

Inclusion criteria

(1) Awareness of the illness.

(2) No known psychiatric or neurological disorders that would interfere with the completion of the measurements.

(3) Stages I–III (i.e. a prediction of at least 6 months to live and not in the terminal phase of the disease).

(4) Receiving chemotherapy.

(5) Able to read the Turkish language.

Data Collection

Data were collected using a questionnaire prepared by the researcher about the demographic characteristics of patients, Hospital Anxiety and Depression Scale (HAD)[16], The Meaning of Illness Questionnaire (MIQ Meaning of Illness Questionnaire (MIQ)[17] and Quality of Life Scale[18]. Data were collected by applying face-to-face interview method by the researcher after the patients were informed about the objective of the research and special permission was received from the patients. The interviews were conducted in the patient's room at the Medical Oncology Clinic at convenient times. The head nurse of the Medical Oncology Clinic provided support in establishing the appropriate environment for the interviews. Each interview lasted approximately 15–20 minutes.

Questionnaire Form: The demographic questionnaire gave information on the age, education, sex, marital status, employment, income, and Social Insurance of the patients. Medical information on the frequency of treatment, stage and type of cancer and information about health status was obtained via the patients' medical records.

Hospital Anxiety and Depression Scale (HAD): HAD scale was developed by Zigmond and Snaith and its validity and reliability were established[16]. Its validity and reliability studies in our country were performed by Aydemir, and cut points were determined as 10 for anxiety and 7 for depression[19]. The hospital anxiety and depression scale consists of 14 items (7 items for depression and 7 items for anxiety symptoms). In this study, internal consistency coefficient was determined as 0.85 for anxiety and 0.86 for depression.

Meaning of Illness Questionnaire: Developed by McAdams et al. (1987)[17] this criterion establishes the meaning the patient attributes to his/her illness[20]. It was prepared to quantify the complex assessment individuals make of their state of existence that is designed to determine (1) the degree to which patients feel the illness affecting their life and interpersonal relations; (2) how the threat of the illness is perceived by the patient; (3) how they evaluate the illness from the point of view of its prognosis; (4) how patients grade the degree to which the illness has harmed them; (5) the level of stress experienced by the patient because of the illness; (6) the extent of the ambiguity and hesitation felt by the patient; (7) the degree to which they are afraid of the recurrence of the illness; (8) their level of optimism and motivation to overcome the illness; (9) changes made in decision-making that can be attributed to have the illness; (10) coping power; and (11) whether the patients are pleased by their general condition and the demeanor of others. The measure consists of 33 questions, two of which (the 5th and 6th) are open-ended. A score from 0–6 is given to every question. The Turkish form of the Cronbach's alpha, which was created by Adaylar (1995)[21] and used on patients with acute and chronic illnesses, yielded a value of 0.76. Cronbach's alpha value was found as 0.74 in the sampling of this study.

Quality of Life Scale: The scale was developed by Padilla in 1992[18]. Its validity and reliability studies in our country were performed by Pýnar, and the scale consists of 33 statements[22]. The scale has 5 sub-scales including psychological quality of life, general physical quality of life, nutrition, symptom troubles, and interpersonal well being; and these sub-scales consist of the questions introduced in the table. Alpha internal consistency of the sub-scales in the study conducted by Pýnar is between 0.79 and 0.90. The quality of life's internal consistency in this study was determined as 0.89, and the internal consistency of sub-scales were found to be between 0.75 and 0.89.

Ethics

The ethical committee form indicating the aim and scope of the research was obtained and necessary permission was received from the Medical Oncology Clinic of Atatürk University Yakutiye Research Hospital. Inclusion of the research comprises of volunteers. After the aim and requirements of the research were explained to the individuals who would participate in the research, they were informed that they were free to participate or withdraw from the research and they were ensured that their personal information would not be disclosed to any other person.

Data analysis

Statistical analyses were performed using the Statistical Package Version 11.5., Percentages, T tests, the Pearson correlation analysis and the internal coherence test were utilized for evaluation of the data. A P value of less than 0.05 was adopted as the significance level in all of the statistical analyses.

Results

Table 1 illustrates the sociodemographic and medical characteristics of the patients. It was determined that 51.8% of the patients were male, 87.4% were married and 46.4% had an average level of income. In terms of disease characteristics, it was found that gastrointestinal tract cancers were the most prevalent with a rate of 36.4%. Another finding was that 68.2% of the patients who participated in the study did not have sufficient information about their health status and 72.7% did not receive any education on chemotherapy.

When meaning of illness questionnaire patterns were examined, it was found that family relationships (4.00±1.17), work, school and domestic responsibilities (4.00±1.18) were affected from the disease at the utmost, and the illness was perceived as a case to be fought against (4.19±1.34). The patients assessed the illness generally as a major source of stress (4.55±1.54). The total quality of life was calculated as a total score (48.83±12.67). Determination reached upon examination of the subscales of the quality of life scale was that the highest and lowest scores were obtained from interpersonal well being (58.66 ±13.22) and nutrition (36.37±19.67) subscales, respectively. The results of the hospital anxiety and depression scale revealed that anxiety score was 9.66±4.61 and depression score was 8.54±4.72. Furthermore, it was determined that 63 (57%) of 110 patients included in the sampling did not have anxiety, 47 (43%) had anxiety (anxiety cut point: 10 points and over), 65 (60%) had depression (depression cut point: 7 points and over), and 45 (40%) did not have depression.

When the relationship between meaning of illness and hospital anxiety and depression was examined, a negatively significant relationship was found between them (($p<0.01$) in the items of perceiving illness as something to be fought against, perceiving illness as a tem-

TABLE 1
DISTRIBUTION OF PATIENTS ACCORDING TO THEIR SOCIO-DEMOGRAPHIC AND DISEASE CHARACTERISTICS

Descriptive Characteristics	Number (N)	Percentage (%)
Gender		
Female	57	51.8
Male	53	48.2
Marital Status		
Married	97	87.4
Single	13	12.6
Education		
Illiterate	50	45.9
Literate	49	44.1
Secondary School	6	5.5
High School	5	4.5
Income Level		
Good	21	19.1
Average	51	46.4
Bad	38	34.5
Social Insurance		
Green Card (Health Card for Uninsured People in Turkey)	63	56.8
SSK (Social Insurance Institution)	20	18.0
Retirement Fund of Civil Servants	18	16.2
Bag kur (Social Security Organization for Artisans and Self-Employed)	9	9.0

Characteristics	Number (N)	Percentage (%)
Disease Duration		
6 months–1 year	35	31.8
More than 1 year	75	68.2
Disease Type		
Respiratory System Cancers	22	20.0
Gastrointestinal Tract Cancers	40	36.4
Leukemia and Lymphosarcomata	27	24.5
Genital System Cancers	6	5.5
Genitourinary System Cancers	8	7.2
Breast Cancer	7	6.4
Comprehension of Health Related Information		
Sufficient	35	31.8
Insufficient	75	68.2
Number of Cures		
1–5	70	63.7
6–10	25	22.6
More than 10	15	13.7
Status of Receiving Education on Chemotherapy		
Received	30	27.3
Not Received	80	72.7

TABLE 2
RELATIONSHIP BETWEEN DISEASE ASSESSMENT SCALE AND HOSPITAL ANXIETY AND DEPRESSION SCALE AND QUALITY OF LIFE

	Item	Anxiety	Depression	Quality of Life
		r	r	r
Effect of disease	1. Effect on daily life	0.563**	0.672**	–0.251**
	2. Effect on friend relationships	0.568**	0.678**	–0.262**
	3. Effect on family relationships	0.558**	0.652**	–0.280**
	4. Effect on work, school, domestic responsibilities	0.527**	0.640**	–0.286**
	5. Other			
Meaning attributed to the perception of disease	6. Harm	0.624**	0.729**	–0.257**
	7. Threat	0.580**	0.663**	–0.220*
	8. Loss	0.624**	0.729**	–0.266**
	9. Fight	–0.514**	–0.613**	0.323**
Prognosis	10. Temporary	–0.337**	–0.448**	0.207*
	11. Permanent	0.070	0.082	–0.188*
	12. Both temporary/permanent	–0.261**	–0.328**	0.159
Functional condition	13. Restrictive	0.599**	0.671**	–0.199*
	14. Worsening	0.624**	0.657**	–0.197*
	15. Destructive-deteriorating bodily functions	0.667**	0.684**	–0.250**
Degree of stress	16. Stress	0.523**	0.538**	–0.105
Estimation of disease	17. Estimating the disease	0.214*	0.153	–0.024
Control of conditions	18. Person's role in catching the disease	0.150	0.109	–0.049
Uncertainty	19. Course of the disease and efficacy of the treatment	–0.343**	–0.434**	0.091
Relapse	20. Relapse risk	0.165	0.002	0.177
Hope	21. Having hope that everything will get better	–0.496**	–0.557**	0.228*
Motivation	22. Being independent in behaviors	–0.538**	–0.627**	0.233*
Response to disease	23. Change it	–0.382**	–0.449**	0.130
	24. Accept it	0.353**	0.428**	–0.229*
	25. More information	0.327**	0.294**	0.008
	26. Self–prevention	0.136	0.128	0.030
Change in decisions	27. Change in decisions	–0.169	–0.197*	0.096
Control of decisions	28. Control of decisions at present	–0.203*	–0.265**	0.233*
Coping strength	29. Energy, strength and patience	–0.360**	–0.441**	0.194*
General condition	30. General condition	–0.654**	–0.721**	0.269**
General attitude	31. General attitude	–0.632**	–0.715**	0.274**

* $p<0.05$ significant ** $p<0.01$ significant *** $p<0.001$ significant

porary condition, hoping that everything will get better, being independent in behaviors, changing the illness, being content with one's general condition and attitude. On the other hand, a positively significant relationship was detected between meaning of illness and anxiety and depression ($p<0.01$, Table 2) in the items where illness was meant in a negative way, such as the effect of disease, negative meanings attributed to the perception of illness, deterioration of functional condition, stress, and accepting the illness. It was concluded that positive assessment of the illness decreases the anxiety and depression scores while negative assessment of the illness increases these scores.

Examination regarding the relationship between meaning of illness and total score average of quality of life indicated a negatively significant relationship and the observation was that the quality of life scores decreased with the increase in the scores of items such as the effect of illness on daily life, work, school and family relationships; perceiving the illness as a fight, loss and threat; worsening of the disease; deterioration of bodily functions; stress; and self-prevention ($p<0.01$, Table 2). It was also observed that the quality of life scores increased with the increase in the scores of items such as assessing disease prognosis as temporary; being independent in behaviors, wanting to change the response to disease, controlling decisions; being energetic, strong and patient; having a good general condition and attitude; which revealed a positively significant relationship ($p<0.01$, Table 2).

Discussion

When the distribution of patients was evaluated as per disease types, the most commonly-observed cancer type was the gastrointestinal tract cancer (36.4%) (Table 1). Similarly, in the study carried out by Tan and Karabulutlu in Erzurum with cancer patients, the rate of gastrointestinal tract cancers was found to be higher. The reason for the higher prevalence of gastrointestinal system cancers in this region is associated with environmental factors and nutrition habits (excessive consumption of hot liquids and smoked meat)[23].

Another determination was that 72.7% of the patients were not informed about the process of chemotherapy. Therefore, it was established that patients need to be efficiently informed.

When meaning of illness patterns were considered, perceiving the illness as a source of stress was observed to be the most prominent meaning pattern. This finding complies with the results of other studies in the literature[5,10,24].

The meaning attributed to the illness is affected by economic, biological, psycho-social and cultural factors as well as individual's life experiences. In the present study, it was observed that the patients perceived the illness mostly as a fact to be fought against. Similar results were obtained by Çavdar like that the illness was comprehended as a fact of fight[13]. Other studies conducted on the subject also showed parallel results in terms of the meaning of illness as a condition to be fight against[14,15].

Another observation in the study was that the illness has the most effect on family relationships, and work life of the patients. These findings are supported by the study results of Çavdar and Kocaman who concluded that the mostly-affected matter from the illness was work life having roles for catching the disease[13,25]. In the study carried out by Büssing and Fischer, most of the patients evaluated the illness as a condition that interrupted their lives[14].

The total score for the quality of life was determined to be at an average level (48.83±12.67). When the subscales of the quality of life scale were examined, interpersonal well being score was found to be the highest. Literature review also revealed a relationship between social and psychological support and quality of life, and that the quality of life increases with the increase in emotional and social support[26–28]. It is thought that the high score averages of interpersonal well being obtained in this study are associated with the fact that family bonds are strong in the province and its surrounding where this study was conducted and thus the patients receive sufficient support from their families and relatives.

In this study, it was determined that positive meaning of illness increased the quality of life, while negative meaning of illness decreased the quality of life. In the study carried out by Downe-Wamboldt et al., it was reported that social support sources and factors affecting the quality of life were effective on meaning of illness in patients with lung cancer[29]. In the studies conducted by Downe-Wamboldt et al. and Mellon, it was also demonstrated that positive meaning of illness increased the quality of life. The results obtained from the present study are similar to the results of previously conducted studies[29,30].

This study revealed an average level of depression and anxiety rates in cancer patients. Studies in the literature reported that depression and anxiety disorders are the most frequently observed psychological disorders accompanying chronic diseases[5,8,9,31].

Güren et al. determined in their study on cancer patients that 25% and 36% of the patients experienced anxiety and depression, respectively[32]. In line with results of these studies, the obtained findings are similar in terms of the higher depression rates compared to anxiety rates in patients.

The illness meant by the sick individual as a condition of uncertainty may increase anxiety, and high anxiety levels, in turn, may increase uncertainty[33]. As reported in the literature, the sense of fear and anxiety aroused by the name of cancer, the long treatment period, uncontrolled side effects, despair, concern for the future, and negative thoughts constitute a risk factor in terms of anxiety and depression[27,34]. In this study, anxiety and depression scores were found to be high in patients who perceived the illness as a threat and felt uncertainty about prognosis. Positive meaning of the illness decreases anxiety and depression scores, whereas negative illness meaning increases anxiety and depression scores. This result shows parallelism with the study results of Büssing and Fischer, and Degner et al.[14,15].

Conclusion

Consequently, the results obtained from this study demonstrated that meaning of illness were effective on their depression and anxiety levels and the quality of life. Positive meaning of illness decreases anxiety and depression levels, and increases the quality of life. Therefore, the patient's meaning of illness pattern should be determined and necessary support should be provided to enable the patient to change his/her negative thoughts. Our findings may have important implications regarding the care of Turkish cancer patients. The results of this study can be utilized in planning support programs to increase the positive meaning of illness of the cancer patients. Nurses have a significant role to play in patients' acceptance of their situation of living with cancer. Nurses should offer opportunities for patients to search for positive meaning in the cancer illness.

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ODNOS IZMEĐU ZNAČENJA BOLESTI, ANKSIOZNOSTI, DEPRESIJE I KVALITETE ŽIVOTA KOD PACIJENATA OBOLJELIH OD RAKA

SAŽETAK

Cilj ove deskriptivne studije bio je ustvrditi odnos između značenja bolesti, anksioznosti, depresije i kvalitete života pacijenata koji primaju kemoterapiju. Studija uključuje 110 pacijenata oboljelih od raka koji su se prijavili za bolničko zbrinjavanje medicinske onkološke klinke od 1. prosinca 2005. do 31. svibnja 2006. u svrhu primanja kemoterapije. Istraženi uzorak obuhvaća 110 pacijenata hospitaliziranih kod medicinske onkološke klinike Sveučilišne bolnice, koji su primali kemoterapiju barem 6 mjeseci. Pri prikupljanju podataka korištena je Bolnička anksioznost i skala depresije (HAD), Upitnik značenja bolesti (MIQ) i Skala kvalitete života. Rezultati dobiveni korelacijskom analizom pokazali su statistički značajnu vezu između značenja bolesti, anksioznosti, depresije i kvalitete života ($p<0,01$). Pozitivno značenje bolesti je povećalo prosječan rezultat kvalitete života i smanjilo anksioznost i depresiju. Rezultati upućuju kako značenje bolesti utječe na anksioznost, depresiju i kvalitetu života. Medicinske sestre trebale bi pacijentima ponuditi mogućnost potrage za pozitivnim značenjem kod bolesti.