FACTORS AFFECTING QUALITY OF LIFE AND LEVEL OF SOCIAL SUPPORT IN CANCER PATIENTS

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ABSTRACT

Background: When people face health problems, their life satisfaction levels and social relations could be ruined. When it comes to an eerie, deadly and chronic disease like cancer, the individual is much more likely to be affected by it.

Objective: This descriptive study aims to identify quality of life and level of social support and the affecting factors in cancer patients.

Methods: The sample included 170 patients who applied to internal diseases, radiation oncology, thorax diseases clinics and chemotherapy polyclinic in a university hospital in Turkey between March and August, 2005, who met the research criteria, and who volunteered to participate in the study. The sample represented 20 % of the target population. Data were collected through SF-36 Quality of Life Scale and Multidimensional Scale of perceived social support.

Results: The patients' global quality of life mean score was found 38.67 ± 13.64, and mean score for the perceived social support was found 59.19 ± 17.5. Global quality of life score was higher in those who underwent an operation and who received ambulatory health care. Although global quality of life was not influenced by the gender variable, male patients' level of well-being was found to be higher. Perceived social support total score was found to be higher in those who knew about their disease. Family support was found to be higher in those who were married and who lived in town; it was found to be low in those who had low socio-economic level and who received inpatient treatment. Friend support was found to be high in those who knew about their disease.

Conclusion: There was a linear relationship between perceived social support and quality of life. It is recommended that more studies with wider groups of participants would shed more light to the issue of identifying quality of life, social support level and the relationships between them in cancer patients.

Keywords: cancer, social support, quality of life

INTRODUCTION

Medicine and treatment methods found at the beginning of 20th century have changed the course of many deadly diseases. Through these developments, the diseases that affect the patient and family

negatively - such as cancer- have become chronic diseases that people have to live with.[1]

Cancer, which is one of the most complicated diseases of our age and which has an increasing prevalence in the world and in our country, is a malign cell disease with unlimited cell division feature. Significant steps have been taken in cancer treatment. However, the disease develops insidiously, its causes are not known well, and it could only be controlled in limited ways. Beside death, cancer is associated with a gradual approach to death in pain, loss of organs due to the course of the disease or treatment, disability, heavy physical burden, and long-lasting treatment methods. For this reason, starting from the diagnosis, the patients and their families are being dragged into different mental depressions at every stage, so their quality of life is affected negatively.[2,3]

Recent developments in medicine have brought about the need to extend patients' life span, increase their quality of life, and solve the psychosocial problems they experience. Individuals' quality of life and the social support they receive are affected by diseases, by the negative situations they face, and by the individual characteristics. When people face health problems, their life satisfaction levels and social relations could be ruined. When it comes to an eerie, deadly and chronic disease like cancer, the individual is much more likely to be affected by it.[4]

Although the quality of life is often defined as an individual's subjective satisfaction about his life, some researchers describe health as a concept of quality of life, which includes the individual's overall physical, mental, social, and spiritual well-being. These life domains are affected negatively in cancer patients. For instance, the individual's physical and psychosocial health are negatively affected by nausea, vomiting, insomnia, fatigue and excessive fear caused by radiotherapy, chemotherapy, and hormonal and surgical treatments. On the other hand, problems related to family and work life and uncertainties about future life also ruin the individual's social and spiritual health. Cancer patients have to face these kinds of stress factors and realize that the support systems they use in coping with problems are inadequate. Thus, they start to feel hopeless, scared, and helpless.[5,6,7]

When encountering stressful situations, people could look at the events in a positive way by using their defense mechanisms better if they can receive the required social support from the people around. It is very important for cancer patients to have social support, which is defined as the support which patients get from the people in their lives and which helps them to cope with emotional problems by triggering psychological resources. It provides patients with the required money, materials or skills, knowledge and advice to help them to cope with situations that cause anxiety.[8]

Many cancer patients experience psychosocial problems due to the changes in their relationships with friends and family. Considering that health conditions gradually become worse, problems gain continuity, and worrying conditions about the disease increase, it is evident that cancer patients need more support. This support is provided primarily by the individual's immediate surroundings. It is reported that cancer patients select people to provide social support according to the most effective social support type they can provide and that the social support given in this way is more effective. For example, while patients prefer to receive information and care support from their health care providers, they prefer to receive the emotional support they need from their families.[4]

Today, protection, maintenance, and improvement of health and rehabilitation services have started to gain importance in the health services provided. Despite the limitations caused by the diseases and treatment methods, some important goals of health services have begun to include helping patients feel good, increase health care skills, maintain daily life activities, and adapt to the planned treatment programs. In this regard, health care professionals have great responsibilities.[9,10] This study aims to identify quality of life and level of social support and the affecting factors in cancer patients.

METHODS

Study Design
This study is descriptive in nature.

Target Population and Participants
The study's target population consisted of 847 patients who applied to Internal Diseases, Radiation Oncology, Thorax Diseases Clinics and Chemotherapy Polyclinic at a university hospital in Turkey in 2004. The sample included patients who applied to the mentioned units between March and August 2005, who had diagnosis at least three months ago, who were aged over 18, who could communicate, and who volunteered to participate in the study. The sample represented 20 % of the target population. The patients were administered the questionnaires by visiting the above-mentioned clinics 3 days a week and chemotherapy polyclinic 5 days a week.

Data Collection
The data were collected between 1st of March, 2005 and 30th of September, 2005. SF-36 Quality of Life Scale and Multidimensional Scale of Perceived Social Support were utilized to collect data through face-to-face interviews conducted by the researcher. Each interview took about 35 minutes.

Questionnaire Form
The form, which was prepared by the researcher in line with the related literature, included 20 questions which aimed to identify the patients' socio-demographic features, social support they receive, and the factors that might affect their quality of life.[7,11] To evaluate the comprehensibility of the questions, the questionnaire was piloted with 15 patients who received inpatient treatment in Internal Diseases clinic; no revisions were made in the form after the administration. The questionnaires administered in the pilot study were not included in the study.

Short Form-36 (SF 36) Quality of Life Scale
The scale was developed by Ware and Sherbourne in 1992. The 36-item scale evaluates 3 sub-dimensions and 8 health domains under these dimensions.[12,13,14] Functional State: It involves titles such as limitation of physical activities due to health problems, limitation of social activities due to emotional and social problems, prevention of daily life activities due to physical health problems, and prevention of daily life activities due to emotional health problems.

The scale involves well-being, mental health, and bodily pain and vitality sub-dimensions. Health Perception: It involves an evaluation of health as a whole and health changes within one year.

As to Global Quality of Life, it involves functional state, well-being and heath perception scales. Scores to be obtained from the Quality of Life scale range between 0 and 100. Higher scores indicate higher life satisfaction.[15] Validity and reliability of the scale in our country was performed by Kocyigit et al. and Pınar.[13,15] In the present study Cronbach's alpha value was found 0,86 for the Global

Quality of Life, 0.84 for Functional State, 0.81 for Well-being, and -.21 for Health Perception.

Multidimensional Scale of Perceived Social Support
The scale, which was developed by Zimet et al. in 1988, aims to identify social support factors perceived by individuals. The scale has 12 questions that contain 3 groups in relation to the source of support (family, friends, a significant other) each of which contains 4 items.[16] Scores to be obtained from the scale range between 12 and 84. Higher scores indicate higher perceptions of social support.[17] Validity and reliability of the Multidimensional Scale of Perceived Social Support in our country was first performed by Eker and Arkar in 1995 and repeated in 2001.[17,18] Cronbach's alpha value in this study was found 0.92 for the Perceived Social Support total, 0.93 for the Perceived Social Support from a significant other, 0.92 for the Perceived Social Support from family, and 0.97 for the Perceived Social Support from friends.

Variables of the Study
Analysis of the data included personal characteristics as the independent variable and the scores obtained from quality of life and social support scales as dependent variables.

Analysis of the Data
To form the composite index, the participants' socio-economic levels were identified by the total values of income, number of rooms at home, toilet and home water available, and responses to vocational and educational questions. Accordingly, socio-economic level score of 4 and below was classified as low (0), the score between 4.1 and 8.4 (1) as medium, and the score 8.5 and over as high (2).[19] The data were analyzed in SPSS package programming, using

Cronbach's alpha, Mann –Whitney U, Kruskal Wallis variance analysis, and Spearman correlation.

Ethical Considerations
Written approval was obtained from the Ethics Committee of Atatürk University Institute of Medical Sciences and the Research Hospital. Before the implementation, the participants were informed about the study and those who accepted to be involved in the study were administered the questionnaires.

RESULTS
Average age of the participants was 50.75 ±14.06, and 55.3% were female and 81.8 % were married. Of all the participants, 65.9 % had a nuclear family, 39.4% lived in a village, 63.6 % had social security, and 52.4% had low socio-economic level. Besides, 57.1% did not know about their diagnosis, 77.1% had had the disease for less than 1 year, and 84.7% had received treatment for less than one year. As to having had an operation or not, 55.9% of the patients underwent an operation, and 81.1% of the patients who had an operation had the operation 12 months (or less) ago. 53.5% received only inpatient treatment (see Table 1).

The patients' Global Quality of Life mean score was found 38.67 ± 13.64, Functional State mean score was found 29.88 ± 18.98, Well-being mean score was found 40.07 ± 17.46, and Health Perception mean score was found 46.07 ± 17.21 (see Table 2).

The patients' Perceived Social Support total mean score was found 59.19 ± 17.5, Perceived Social Support from a significant other mean score was found 17.73 ± 7.9, Perceived Social Support from family mean score was 24.34 ± 5.27, and Perceived Social Support from friends was found 17.16 ± 8.65 (see Table 2).

The patients' Quality of Life mean scores were analyzed according to the

socio- demographic features and features about the process of the disease. It was found that well-being sub-scale mean score was significantly higher in males. Functional State and Well-being sub-dimensions and Global Quality of Life mean scores were found to be significantly higher in the patients who did not undergo an operation and who received ambulatory treatment (see Table 3). No significant differences were found in Global Quality of Life and sub-dimension mean scores in terms of such variables as marital status, family type, place of living, social security, socio-economic level, knowing about the disease, duration of the disease, duration of the treatment, and duration after the operation.

Table 1 Descriptive Features of the Patients

Descriptive Features of the Patients		N	%
Gender	Female	94	55.3
	Male	76	44.7
Marital Status	Married	139	81.8
	Single	31	18.2
Family Type	Nuclear Family	112	65.9
	Extended Family/Fragmented Family	58	34.1
Place of Living	City Center	66	38.8
	Town Center	37	21.8
	Village	67	39.4
Having Social Security	No	62	36.4
	Yes	108	63.6
Socio-Economic Level	Good	8	4.7
	Medium	73	42.9
	Poor	89	52.4
Knowing about the Disease (diagnosis)	Yes	73	42.9
	No	97	57.1
Duration of Disease	12 months and less	131	77.1
	13 months and more	39	22.9
Duration of Treatment	12 months and less	144	84.7
	13 months and more	26	15.3
Having ondergone an Operation	Yes	95	55.9
	No	75	44.1
Duration after the Operation	12 months and less	77	81.1
	13 months and more	18	18.9
Place of Treatment	Ambulatory treatment	36	21.2
	Only inpatient treatment	91	53.5
	Both	43	25.3
X±SD			
Age	50.75±14.06 Min 18 Max 80 Med 54		

The patients' social support mean scores were analyzed according to their socio-demographic features and features about the process of the disease. Perceived Social Support from family was found to be higher in those who were married and who lived in town. However, those who had low socio-economic level and who received inpatient treatment had low scores; the results were statistically significant. Perceived Social Support from friends and Perceived Social Support total mean scores were significantly higher in those who knew about their disease (see Table 4, 5). No significant differences were identified in the Perceived Social

Support Total and sub-dimension mean scores in terms of the variables such as gender, family type, social security, duration of the disease, duration of the treatment, having undergone an operation or not, and duration after the operation.

Table 2 The Patients' Quality of Life and Social Support Scale Scores

Scales and sub-scales	X±SD	Min.	Max.	Med.
Global Quality of Life	38.67±13.64	10.37	78.71	38.26
Functional State	29.88±18.98	0	100	25.07
Well-being	40.07±17.46	0	84.22	41.05
Health Perception	46.07±17.21	15	87.50	41.75
Perceived Social Support Total	59.19±17.5	12	84	63
Perceived Social Support from a significant other	17.73±7.9	4	28	20
Perceived Social Support from family	24.34±5.27	4	28	26
Perceived Social Support from friends	17.16±8.65	4	28	20

Table 3 Distribution of Patients' Quality of Life Mean Scores According to Some Socio-Demographic Features and Features related to the Disease

Quality of Life Scale	Gender			Having ondergone an operation			Place of Treatment			
	Female X±SD	Male X±SD	U	Yes X±SD	No X±SD	U	Ambulatory treatment X±SD	Only inpatient treatment X±SD	Both X±SD	KW
Functional State	27.32 ±17.95	33.04 ±19.85	2960.0	26.21 ±16.19	34.53 ±21.23	2722.0**	31.73 ±18.99	35.53 ±20.93	22.06 ±14.97	12.436**
Well-being	37.13 ±17.03	43.71 ±17.40	2771.5 *	37.17 ±16.95	43.74 ±17.51	2679.0**	41.75 ±17.53	44.92 ±18.12	33.22 ±14.69	9.409**
Health Perception	48.30 ±18.30	43.30 ±15.44	3035.0	46.25 ±17.57	45.83 ±16.87	3509.0	46.73 ±18.63	46.64 ±15.34	44.59 ±16.05	.478
Global Quality of Life	37.58 ±13.94	40.01 ±13.21	3198.5	36.54 ±12.84	41.36 ±14.21	2829.5*	40.07 ±14.16	42.36 ±13.72	33.29 ±10.83	8.436*

*p<0.05   ** p<0.001

Table 4 Distribution of Patients' Social Support Mean Scores according to Some Socio-Demographic Features

Social Support Scale	Marital Status			Place of Living				Socio-Economic Level			
	Married X±SD	Single X±SD	U	City Center X±SD	Town X±SD	Village X±SD	KW	Good X±SD	Medium X±SD	Poor X±SD	KW
Perceived Social Support from a Significant Other	17.51 ±7.96	18.74 ±7.56	1898.5	17.36 ±7.98	16.70 ±8.61	18.67 ±7.36	1.608	13.87 ±9.48	18.00 ±7.85	17.86 ±7.77	1.612
Perceived Social Support from Family	24.96 ±4.29	21.58 ±7.87	1629.5 *	24.61 ±5.83	25.30 ±3.60	23.55 ±5.42	6.103*	25.75 ±3.73	25.75 ±4.10	23.06 ±5.91	16.141 **
Perceived Social Support from Friends	17.27 ±8.69	16.68 ±8.61	2054.5	18.06 ±8.37	15.78 ±8.79	17.03 ±8.87	1.598	19.12 ±7.70	17.47 ±8.94	16.73 ±8.55	1.251
Perceived Social Support Total	59.68 ±17.19	57.00 ±18.98	1999.0	60.03 ±16.97	57.57 ±18.25	59.25 ±17.80	.415	58.75 ±13.92	61.22 ±16.78	57.56 ±18.34	2.060

*p<0.05   ** p<0.001

Table 5 Distribution of Patients' Social Support Mean Scores according to some Features related to the Disease

Social Support Scale	Knowing about the Disease			Place of Treatment			
	Yes X±SD	No X±SD	U	Ambulatory treatment X±SD	Only inpatient treatment X±SD	Both X±SD	KW
Perceived Social Support from a Significant Other	18.64±8.04	17.05±7.73	2959.5	18.76±6.54	15.11±8.77	17.44±9.33	2.785
Perceived Social Support from Family	24.26±5.58	24.40±5.05	3389.0	23.07±6.13	25.66±3.09	25.79±4.10	14.519**
Perceived Social Support from Friends	19.60±8.01	15.32±8.70	2470.5**	18.64±7.41	13.71±9.18	16.53±9.98	5.562
Perceived Social Support Total	62.40±19.09	56.77±15.88	2656.0*	60.38±16.59	54.49±16.70	59.77±19.72	2.808

*p<0.01   ** p<0.001

The relationship between the Patients' Quality of Life and sub-dimensions and Multidimensional Scale of Perceived Social Support was analyzed according to Spearman Correlation. There was a weak, positive relationship between Global Quality of Life and Perceived Social Support from family sub-dimension; and there was a weak, positive relationship between Health Perception sub-dimension and Perceived Social Support Total and Perceived Social Support from friends (see Table 6).

Table 6 Correlation Matrix of the Scales and Sub-Dimensions Used in the Study

Quality of Life Scale		Perceived Social Support from a Significant Other	Perceived Social Support from Family	Perceived Social Support from Friends	Perceived Social Support Total
Functional State	r	.045	.015	.126	.085
	p	0.558	0.845	0.102	0.272
Well-being	r	.060	.045	.148	.108
	p	0.438	0.559	0.053	0.162
Health Perception	r	.137	.084	**.165**	**.174**
	p	0.074	0.278	**0.032**	**0.023**
Global Quality of Life	r	.094	.064	**.173**	.144
	p	0.225	0.410	**0.024**	0.060

DISCUSSION

An analysis of the distribution of Quality of Life mean scores according to gender indicates that males received higher scores in the well-being dimension, and the difference was found to be statistically significant (see Table 3). Similar studies reported that gender had no effect on quality of life.[6,7,20,21,22] Male patients' higher quality of life might have resulted from their efforts to be strong due to the gender-specific responsibilities that the culture assigns them.

An analysis of the distribution of quality of life mean scores according to having received an operation or not indicates that Global Quality of Life, Functional State, and Well-Being sub-dimension scores were higher in those who did not undergo an operation (see Table 3). In their study conducted with cancer patients, Arslan and Bölükbaş found that Quality of Life total score was higher in those who underwent an operation.[7] High scores in Quality of Life total, Functional State and Well-Being sub-dimensions in our study might result from factors such as inability of patients who underwent an operation in carrying out their daily activities, and continuation of the chemotherapy or radiotherapy treatment after the operation.

An analysis of the distribution of Quality of Life mean scores according to

the place of treatment shows that the Global Quality of Life was highest in those who received ambulatory treatment, and the difference was statistically significant (see Table 3). In the study conducted by Karamanoğlu with cancer patients and in the study conducted by Pınar with diabetic patients, Quality of Life total score was found to be higher in the patients who received ambulatory treatment, but the difference was not statistically significant.[13,22] High quality of life scores in those who received ambulatory treatment might result from the fact that sleep order, nutrition style and social life are affected negatively in those who receive inpatient treatment.

An analysis of the distribution of Perceived Social Support mean scores according to marital status indicates that Perceived Social Support from family was significantly higher in those who were married (see Table 4). In their study conducted with cancer patients, Tan and Karabulut found no statistically significant differences,[11] but the study conducted with hemodialysis patients indicated that family support was high in those who were married.[23] Some studies indicating high family support report that such case might result from the emotional support provided by spouse and children through sharing problems such as role changes and life changes experienced by patients.[24,25] High social support scores of married people in this study could result from married people's receiving support from parents, siblings, spouse and children.

An analysis of the distribution of Perceived Social Support mean scores according to place of living indicated that perceived social support from family was significantly higher in those who lived in town (see Table 4). In their study with cancer patients, Tan and Karabulut found that people who lived in town received high scores in Perceived Social Support

from family, but the result was not statistically significant.[11]

Perceived Social Support mean scores were analyzed according to socio-economic level, and Perceived Social Support from family was found to be statistically lower in those who had low socio-economic level (see Table 4). The related literature provides no information about social support in this issue.

Distribution of Perceived Social Support means were analyzed according to knowing about the diagnosis. It was found that Perceived Social Support total score and perceived social support from friends were higher in those who knew about their disease, and the difference was statistically significant. (See, Table 5). High social support found in this study might result from the factors such as cancer patients' experiencing many psychological problems -primarily anxiety and depression-, and thus receiving support from other people such as family and friends in their social web, and these people's providing even more support to patients in order to save them from the feelings of hopelessness and social isolation.

An analysis of Perceived Social Support mean scores according to the place of treatment shows that Perceived Social Support from family was higher in patients who received ambulatory treatment and who received both kinds of treatment; the difference was statistically significant (see Table 5). A study conducted by Aladağ, with patients who received inpatient treatment and ambulatory treatment indicates that Perceived Social Support from family was higher in the patients who received ambulatory treatment, and the difference was statistically significant.[26] Lower Perceived Social Support from family in those who received inpatient treatment could be explained with the fact that

accompanying a person during hospitalization and being responsible for all his needs about the treatment could be quite wearing for family members after some time. Therefore, decrease in social support level is inevitable. Another factor could be the patient's being away from the family environment.

LIMITATIONS OF THE STUDY
Limitations of the study are that hospital archive was used in order to identify the target population; the researcher had to wait for the patients to apply to the units where the study was conducted; some patients who were administered other questionnaires before, particularly educated ones, did not want to participate in the study; communication was not possible in laryngectomy patients in the otorhinolaryngology clinic and therefore they could not be involved in the study; and there was only one researcher.

CONCLUSION
This study found that gender, place of treatment, and having ondergone an operation affected quality of life; and marital status, place of living, socio-economic level and knowing about the diagnosis, and place of treatment affected the Perceived Social Support level. Besides, a weak and positive relationship was found between Quality of Life and sub-dimensions and Social Support and sub-dimensions.

It is recommended that studies should be conducted with larger groups of participants in order to identify cancer patients' Quality of Life, Social Support level and the relationship between them.

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