



Assessment of Quality of Life in Caregivers of the Patients with Hematologic Neoplasms

Hematolojik Neoplazmı Olan Hastaların Bakım Verenlerinin Yaşam Kalitesinin Değerlendirilmesi

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ABSTRACT

Aim/Background: Malignant diseases impair not only the quality of life of the patient but also the caregivers. The present study aims to investigate the quality of life in caregivers of the patients with hematologic neoplasms and determine the relationship between the subscales of quality of life (QOL) and socio-demographic characteristics of caregivers. **Methods:** One hundred consecutive caregivers of the patients who were hospitalized at Bone Marrow Transplant Unit and Hematology Department between 01 May 2015 and 30 June 2015 were included in this prospective, single center, cross-sectional study. Socio-demographic data of the patients and the caregivers were collected using a questionnaire form, QOL was evaluated using short-form 36. **Results:** Quality of life was found to be impaired in 46% of the caregivers. Given that a score of 100 defines full health status, bodily pain (31.3) and mental role (35.9) subscale scores were found to be the most affected subscales and physical functioning (71.8) subscale was found to be the least affected. There was a statistically significant difference between the age of the caregiver and physical role. Physical role and social functioning were better in caregivers who have economic support. There was a difference between employed and unemployed caregivers with regard to physical role and pain subscales. Overall health perception subscale score was higher for the caregivers of male patients. Graduates of the university were found to experience less pain. **Conclusions:** Cancer impairs not only the life quality of the patient but also the caregiver. So, the patient and the caregiver should be evaluated together and family physicians should take place in the center of and coordinate the interventions required for improving the quality of life of the caregivers.

Key words: Hematologic neoplasms, quality of life, caregivers, family practice

ÖZET

Giriş ve Amaç: Malign hastalıklar sadece hastanın değil, ailenin de yaşam kalitesini etkiler. Bu çalışmada hematolojik neoplazmı olan hastaların bakım verenlerinin yaşam kalitesinin araştırılması ve yaşam kalitesi alt ölçekleri ile bakım verenlerin sosyo-demografik özellikleri arasındaki ilişkinin belirlenmesi amaçlanmıştır. **Yöntem:** Bu prospektif, tek merkez, kesitsel çalışmaya 01 Mayıs 2015 ile 30 Haziran 2015 tarihleri arasında Başkent Üniversitesi Kemik İliği Nakli Ünitesi ve Hematoloji Bölümü'nde yatırılan yüz ardışık hastanın bakım verenleri alınmıştır. Hastaların ve bakım verenlerin sosyo-demografik verileri anket formu kullanılarak toplanmıştır, yaşam kalitesi ise kısa-form 36 ile toplanmıştır. **Bulgular:** Bakım verenlerin %46'sında yaşam kalitesinin bozulduğu bulunmuştur. Tam sağlık durumunu belirten skorun 100 olduğu düşünüldüğünde, vücut ağrısı (31.3) ve mental rol (35.9) en fazla etkilenen alt ölçekler iken fiziksel işlevselliğin (71.8) en az etkilendiği bulunmuştur. Bakım verenin yaşı ile fiziksel rol arasında istatistiksel olarak anlamlı fark vardı. Ekonomik desteği olan bakım verenlerin fiziksel rol ve sosyal işlev alt ölçekleri daha iyiydi. Çalışan ve çalışmayan bakım verenler arasında fiziksel rol ve ağrı alt ölçekleri bakımından fark vardı. Genel sağlık algısı alt ölçeği skoru erkek hastaların bakım verenlerinde daha yüksekti. Üniversite mezunlarının daha az ağrı yaşadıkları bulunmuştur. **Sonuç:** Kanser sadece hastanın değil, aynı zamanda bakım vericinin de yaşam kalitesini etkiler. Bu nedenle hasta ve bakım vericisi birlikte değerlendirilmeli, aile hekimleri bakım vericilerin yaşam kalitesinin artırılması için gereken girişimlerde merkezde olarak koordinasyon sağlamalıdır.

Anahtar kelimeler: Hematolojik neoplazmlar, yaşam kalitesi, bakım verenler, aile hekimliği

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BACKGROUND

Cancer is a gradually increasing health problem. While it was the seventh leading cause of death at the beginning of this century, it has become the second leading cause of death following cardio-vascular diseases today.^{1, 2} The prevalence of cancer-related deaths is gradually increasing in our country as in other countries worldwide.³ The expected lifetime has gradually increased together with the advancements in the diagnosis and treatment of cancer. The role of the caregivers also increased due to the increasing cancer incidence and tendency to home care.⁴ Cancer is an important cause of stress both for the patients and the caregivers. "Objective burden" is defined as the total effort spent to meet the needs of a patient and can include emotional support, daily living activities, financial support, medical decision-making and household chores for a family caregiver. The caregivers should continue their own responsibilities while caring for the patient. However, their needs are usually neglected even by themselves. Although care giving has some positive aspects like enjoyment, meeting obligations, fulfillment, family caregivers may become overburdened, feel depressed, nervousness, fragile, may experience marital problems, social conflict and not only the patient but also the caregivers need attention.^{5,6,7,8}

The caregivers of cancer patients are reported to have a poorer quality of life (QoL).^{3,8} QoL is known to impair in cancer patients and families and interpreted as the individual's point of view towards life. Factors like the demographic and psychosocial characteristics of the caregiver, his/her status of receiving social support, the patient's functional condition might affect QoL.³

The patient and the family should be evaluated together in the context of the core competencies of family medicine like holistic approach, patient-centered care, comprehensive care. The need for attention both for the cancer patient and the caregivers is also reflected in the WHO definition of palliative care in which caring for the family caregiver is mentioned as an essential part of palliative care.⁸ The bio-psycho-social approach is of great importance in the management of cancer patients, and family physicians, social service specialists, home care providers, clergymen, nurses, pharmacists and the primary physician of the patients should work together, the family physician is responsible for the coordination.⁹

Despite the presence of the studies in the literature investigating QoL of the caregivers of cancer patients, there are a limited number of studies about the caregivers of the patients with hematologic malignancies which have high death rate and frequent and long hospitalization. Our study was conducted with the aim of investigating the QoL of the caregivers of patients with hematological malignancies and to determine the relationship between the subscales of QoL and socio-demographic characteristics of caregivers.

METHODS

Subjects

This study used a prospective, single center, cross-sectional design with consecutive sampling. Subjects were recruited from the Bone Marrow Transplant Unit and Hematology Department of Başkent University. One hundred consecutive caregivers of the patients who were admitted between 01 May 2015 and 30 June 2015 were included in the study. The inclusion criteria for the caregivers were as follows: (a) taking care of daily needs of the patients with hematologic malignancy, (b) aged 18 years and above, (c) having the ability to talk Turkish. The caregivers who had a systemic infection, chronic disease, severe psychiatric disorder, who experienced an orthopedic trauma within the recent one month were excluded.

Demographic characteristics of the patients (age, gender, education level, monthly income, marital status, kinship grade, employment status), whether they receive social support, economic support, functional status of the patient, living in the same house, time from cancer diagnosis, the time spent with the patient were defined as independent variables.

The primary endpoint was defined as the quality of life of the caregivers.

Assessment Tools

Socio-demographic data form was used to obtain the abovementioned independent variables.

The Short Form 36 Health Survey was designed to evaluate functional health, well-being and QoL in population surveys. The SF-36 is composed of eight health domains: physical functioning (PF) (10 items), role limitations due to physical problems (4 items), bodily pain (BP) (2 items), general health (5 items), energy/vitality (4 items), social functioning (SF) (2 items), role limitations due to emotional problems (4 items) and mental health (MH) (5 items). Assessments are done using Likert type except items 4 and 5. The subscales evaluate the health between 0 and 100, while 0 indicates poor health, 100 indicates the best health condition. Turkish validity and reliability study was done by Kocyigit et al.¹⁰

Sample Size

Sample size was calculated for average scores of subscales of quality of life scale and this variable was used for calculation of sample size. The spiritual average was obtained as 5.4 ± 1.4 for females and 5.8 ± 1.3 for males. Win-Epi 2.0 program was used for the calculation of sample size. It was decided that 100 patients should be included in the study as the result of sample calculation done with 95% CI and 80% power.

Statistical Method

Statistical package for social sciences (SPSS) for Windows version 11.5 was used for statistical analysis. Mean,

standard deviation, minimum and maximum values were given for normally distributed continuous variables. Frequency and percent values were given for categorical variables. Independent samples t-test was used for comparison of two independent groups for normally distributed continuous variables. More than two groups were compared using ANOVA test for normally distributed continuous variables. A p level of <0.05 was accepted as statistically significant.

RESULTS

Socio-demographic characteristics of the patients

Of the patients, 47(47%) were female and 53(53%) were male, mean age was 50.6±16.8 years (range 18-84), time from diagnosis was 12 months and above in 64% of the patients. Acute myeloid leukemia (AML) (34%), multiple myeloma (MM) (27%) and lymphoma (13%), acute lymphocytic leukemia (ALL)(13%) were the leading diagnoses followed by myelodysplastic syndrome (MDS)(8%), chronic lymphoid leukemia (CLL)(3%), chronic myeloid leukemia (CML)(2%). Performance status of the patients was evaluated using ECOG (Eastern Cooperative Oncology Group) score, while it was found as 1(Restricted in physically strenuous activity but ambulatory and able to carry out work of a light or sedentary nature, e.g., light housework, office work) in 48% of the patients, it was 4 (Completely disabled; cannot carry on any self-care; totally confined to be dorchair) in 4% of the patients.

Socio-demographic characteristics of the caregivers

Of the caregivers, 66% were female and 34% were male with a mean age of 44.6±12.0 years (range 20-66). Mean monthly income was found as 1063.6 ± 958.6 TL (0-4000), 49% were graduates of primary school, 79% were married, 67% were not working, 74% were living with the patient. The ratio of the partners was found the most among the caregivers (36%) followed by offspring (28%), sibling (16%). Care of the patient was maintained by more than one person in 37% of the patients. Of the caregivers, 15% were receiving economic support for the care of the patients, 9% of the caregivers stated that they were receiving economic support from the family and 6% from the government, 67% of the participants were not living in the same city where the hospital was located, 61% of the participants had been staying at the hospital for 0-7 days and 13% had been staying at the hospital for 21-30 days during the recent month, 70% of the participants stated that they spent 8 hours or more daily with the patient.

Table 1. Socio-demographic characteristics of the patients (n=100)

Characteristics	n	%
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Gender		
Female	47	47
Male	53	53
Age (Mean±SD) year	50.6±16.8	(18-84)
Time from diagnosis		
0-3 months	15	15
3-12 months	20	20
≥12 months	65	65
ECOG performance status		
0	11	11
1	49	49
2	25	25
3	11	11
4	4	4
Primary hematological malignancy		
AML	34	34
ALL	13	13
MM	27	27
Lymphoma	13	13
MDS	8	8
CML	2	2
CLL	3	3

QoL was impaired in 46% of the caregivers. Given that a score of 100 defines full health status, bodily pain (31.3) and mental role (35.9) subscale scores were found to be the most affected subscales and physical functioning (71.8) subscale was found to be the least affected.

We could not find a difference between gender groups of the caregivers with regard to SF-36 subscales (p>0,05).

While there was not a difference between the caregivers who received or not received social support with regard to SF-36 subscales (p>0,05), social functioning was found to be better, physical functioning and physical role were found to be worse among the caregivers who received economic support (p<0,05).

While there was not a statistically significant difference between the caregivers who were living in the same house or not with regard to SF-36 subscales (p>0,05), we detected a statistically significant difference between the caregivers who were living in the same city as our hospital and who were living in another city with regard to general health, it was better in the caregivers who were living in the same city where the hospital was situated (p<0,05).

We found a statistically significant difference when we compared SF-36 subscales and time from diagnosis, there was a significant difference between 3-12 months' group and 12 months and above group with regard to social functioning, it was poorer in 12 months and above group (p<0,05).

Table 2. Socio-demographic characteristics of the caregivers (n=100)

Characteristics	n	%
Gender		
Female	66	66
Male	34	34
Age (Mean $\pm$ SD) year	44.5 $\pm$ 12.0 (20-66)	
Marital status		
Married	79	79
Single	18	18
Divorced	3	3
Level of education		
Illiterate	6	6
Primary school	49	49
High school	19	19
University	26	26
Monthly income	1063 $\pm$ 958 (0-4000 TL)	
Occupational status		
Working	29	29
Not working	67	67
Suspended work	4	4
Social support		
Yes	37	37
No	63	63
Economic support		
Yes	15	15
No	80	80
Not responded	5	5
Source of economic support		
Family	9	9
Government	6	6
Living in the same house		
Yes	74	74
No	26	26
Duration of daily care (hour)		
1-3	13	13
3-8	17	17
>8	70	70
Duration of staying at hospital in recent one month (day)		
0-7		
7-14	62	62
14-21	18	18
21-30	6	6
	14	14
Residence		
In the same city	33	33
At another city	67	67
Relativity		
Partner	37	37
Offspring	28	28
Sibling	16	16
Mother	10	10
Father	3	3
Other	6	6

Table 3. Relationship between subscales of SF-36 and socio-demographic characteristics of the caregivers

	Physical functioning	Physical role	Pain	General health	Vitality	Social functioning	Mental role	Mental functioning
	Mean±SD	Mean±SD	Mean±SD	Mean±SD	Mean±SD	Mean±SD	Mean±SD	Mean±SD
Gender								
Female	70.1±24.7	45.4±45.5	34.0±25.4	51.3±10.0	47.4±13.1	50.3±18.5	30.2±39.9	52.3±12.2
Male	75.1±24.1	58.0±48.7	25.8±25.3	48.8±10.0	46.6±15.4	45.2±21.2	47.0±44.2	52.9±11.5
P value	0.340	0.203	0.130	0.236	0.785	0.223	0.059	0.802
Social support								
Yes	77.0±23.5	54.0±48.4	26.4±22.8	50.6±10.7	47.9±13.0	50.4±16.6	29.7±41.4	51.0±11.9
No	68.8±24.7	47.2±46.0	34.1±26.8	50.4±9.8	46.6±14.4	47.5±21.1	39.6±42.2	53.4±11.9
P value	0.103	0.484	0.151	0.895	0.653	0.444	0.255	0.341
Economic support								
Yes	58.4±28.7	21.6±35.1	42.0±27.8	50.6±8.2	46.0±12.9	61.3±14.2	26.6±40.2	52.0±11.6
No	74.2±23.0	54.7±47.0	29.4±24.8	50.4±10.4	47.3±14.1	46.3±19.5	37.6±42.3	52.6±12.0
P value	0.021	0.004	0.079	0.945	0.731	0.006	0.354	0.856
Living in the same house								
Yes	69.3±23.2	48.3±46.6	33.3±25.5	51.4±9.6	46.0±13.9	47.9±20.0	35.1±41.2	52.6±11.4
No	78.9±26.9	53.8±47.7	25.3±25.3	47.8±11.0	50.1±13.8	50.4±18.3	38.4±44.9	52.1±13.5
P value	0.088	0.606	0.172	0.126	0.197	0.576	0.730	0.857
Living in the same city								
Yes	75.0±21.6	55.3±45.3	35.4±27.3	53.4±9.7	46.8±14.3	46.2±21.1	41.4±42.5	52.4±12.6
No	70.3±25.7	47.0±47.5	29.2±24.6	49.0±10.0	47.3±13.8	49.7±18.7	33.3±41.8	52.5±11.6
P value	0.373	0.408	0.257	0.038	0.868	0.404	0.369	0.984
Time from diagnosis								
0-3 mo	75.3±25.3	55.0±46.4	32.0±21.7	50.0±8.8	51.0±14.4	50.3±13.7	33.3±45.4	52.2±11.1
3-12 mo	60.0±23.4	31.2±46.5	40.5±30.8	51.5±10.2	48.7±13.0	57.8±13.9	33.3±38.9	50.6±11.4
12 mo and above	74.5±24.0	53.5±46.2	28.2±24.5	50.2±10.5	45.7±14.1	45.3±21.4	36.4±42.2	53.1±12.4
P value	0.056	0.156	0.179	0.875	0.357	0.040	0.940	0.716
Duration of daily care-giving								
1-3 h	86.5±13.7	78.8±40.6	13.0±14.9	48.0±12.3	46.1±9.3	50.7±12.4	58.9±47.4	52.3±11.3
3-8 h	73.4±23.4	54.9±50.1	31.2±30.3 0	49.6±12.0	46.8±13.15	41.0±25.9	29.1±34.1	50.7±11.9
8 h and above	68.9±25.6	42.0±45.3	34.5±25.0	50.8±9.0	47.3±15.0	50.6±17.9	32.8±41.8	52.8±12.2
P value	0.057	0.030	0.020	0.634	0.958	0.184	0.096	0.820
Employment status								
Not working	70.6±25.1	43.2±46.3	35.3±24.3	51.4±10.5	47.0±14.0	49.7±20.2	30.3±40.5	51.6±12.0
Working	74.8±24.6	67.2±44.3	21.3±25.0	47.7±9.2	46.5±13.6	45.4±18.1	45.9±43.1	53.7±12.4
Suspended work	71.2±10.3	31.2±47.3	35.0±36.9	55.0±4.0	53.7±17.0	52.5±20.1	58.3±50.0	58.0±4.0
P value	0.746	0.049	0.045	0.177	0.624	0.564	0.137	0.470
Educational status								
Illiterate	67.0±30.7	16.6±30.2	46.6±23.3	45.8±5.8	52.5±11.2	57.9±14.2	0.0±0.0	44.00±14.75
Elementary-intermediate school	67.2±26.5	47.9±47.2	34.6±26.9	50.9±11.6	46.8±16.4	45.1±21.0	42.1±42.3	52.0±11.9
High school	78.6±16.8	51.2±45.2	34.7±25.6	52.8±9.6	47.3±11.7	54.7±18.3	24.5±38.2	54.5±10.1
University	76.5±22.9	59.6±48.5	18.8±19.2	49.0±7.6	46.3±10.7	48.6±17.5	41.0±44.5	53.8±12.4
P value	0.230	0.238	0.021	0.401	0.806	0.187	0.062	0.268
Duration of hospital stay during the recent one month								
0-7 d	73.3±24.2	55.7±46.8	27.7±26.7	49.1±10.7	46.0±13.9	47.4±19.7	40.9±43.1	52.4±12.1
7-14 d	70.2±22.3	50.0±48.5	35.0±20.3	52.2±8.9	48.6±15.4	53.4±15.5	27.7±38.3	53.3±11.3
14-21 d	77.5±3.78	16.6±30.2	48.3±18.3	50.8±3.7	45.8±18.8	52.9±15.4	22.2±40.3	49.3±13.7
21-30 d	66.9±28.6	28.8±41.8	33.8±29.0	51.1±8.2	50.3±11.0	52.8±17.3	25.6±43.3	52.0±12.9
P value	0.781	0.085	0.235	0.675	0.736	0.535	0.407	0.919

Independent samples t-test
ANOVA

We found statistically significant differences when we compared SF-36 subscales and duration of daily caregiving. There was a statistically significant difference between 1-3 hours and, 8 hours and above groups with regard to physical role and pain. Physical role score was higher and pain was less in 1-3 hours' group ($p<0,05$).

When we compared SF-36 subscales and employment status, we found a statistically significant difference between the employed and unemployed caregivers with regard to physical role and pain in favor of working group ($p<0,05$).

When we compared SF-36 subscales and educational status, we found a statistically significant difference between the graduates of primary school and graduates of university with regard to pain. Graduates of university reported less pain ($p<0,05$).

We could not find a difference when we compared SF-36 subscales and duration of hospital stay during the recent one month ($p>0,05$).

DISCUSSION

Hematological neoplasms are life-threatening conditions which lead the patient and the caregiver lose their control on their lives, negatively affect social life, work and marriage, impair health and QoL.¹¹ Caregivers of cancer patients were shown to experience depression, anxiety, psychosomatic symptoms, physical problems, marital problems and have a poor QoL.¹¹

We found a statistically significant, negative, weak correlation between the age of the caregiver and physical role, consistently with literature.¹² We did not find a difference with the other subscales. This may be associated with the poor health status of the caregiver himself/herself due to aging. QoL life was observed to decrease as the age of the caregiver increased.^{3,13}

We did not find a statistically significant difference between the gender of the caregiver and subscales of SF-36. In a study, 76% of the caregivers were found to be female, two third of them were the spouse of the patient, they were spending mean 16 hours a week with the patient.¹⁴ We may explain the difference with different cultural approaches. Namely, due to closer family bound in Turkey, any member of the family may serve as a caregiver¹⁵, whereas the nuclear family structure is in the foreground particularly in Western communities. In another study, 72.3% of the caregivers were the partners.¹⁶

We found physical functioning poorer and social functioning better in caregivers who have economic support. Deniz found a statistically significant difference between economic status and all subscales of SF-36 except social functioning subscale and concluded that better economic status reduced disease burden.¹⁷ Cancer and its treatments bring an economic burden both for the patient and the family.¹⁸ This problem may complicate the care of the patient who is already under stress due to treatment issues and the family caregiver may have to overcome both disease-related problems and economic problems because caregivers were reported to suspend work, change his/her work or drop working.¹⁹ In our study, 67% of the caregivers were not working and 4% had suspended work. We found a statistically significant difference between employed and unemployed caregivers with regard to physical role and pain subscales. Better physical role and feeling less pain may be associated with the therapeutic effect of working, namely an opportunity to forget about the problems temporarily, being able to get the support of colleagues and thereby an opportunity for socializing. Grunfeld et al. found in their study conducted with terminal period breast cancer patients that 56% of the caregivers were working, of them 53% suspended work at the

beginning of the disease, this ratio was 77% in the terminal period.²⁰ We could not make a comparison with this study and ours due to the small number of the caregivers who suspended work. Lee et al. found that depression ratio was higher among the unemployed caregivers.²¹ QoL was found lower among the caregivers who did not have any occupation and who did not work.³ Lee et al. reported that unemployment was a risk factor for depressive disorder in cancer patient caregivers.²¹ The low rate of economic support and the high rate of being unemployed increase the importance of economic support. Mean monthly income of our participants was low (1063 TL) in our study. Longo et al. reported that 20% of the caregivers had significant financial burden.²²

In our study, we found that only overall health perception subscale score was higher for the caregivers of male patients. Karabuga et al. investigated the factors which influenced the QoL in caregivers of cancer patients in 120 participants and found that QoL of the caregivers who were care giving for a male patient was lower. The authors associated this with males exaggerated their illness.²³ QoL was found lower among the caregivers of male patients also in the study of Can et al.²⁴

We did not find a statistically significant difference between social support and SF-36 subscales. In the study of Shieh et al. conducted with the caregivers of colorectal cancer patients, the caregivers who had less social support were found to feel more care burden.²⁵ Several authors stress the importance of family support and of social resources in care giving of cancer patients. Social support is reported to be associated with less negative health outcomes for the caregiver.^{26,27} Nijboer et al. found that lack of social support was predictive of caregiver depression.²⁶ Ovayolu et al. detected that 72.5% of the caregivers received support for care giving from another person and they found QoL lower among those who did not receive support.³ Sherif et al. showed that QoL was lower among the caregivers of terminally ill cancer patients.²⁸ Masoomah et al. reported high level of social support among the caregivers of cancer patients.²⁹

We found that there was a statistically significant difference between the caregivers who were graduates of primary school and university with regard to pain subscale, graduates of university were experiencing less pain. This may be explained with their better coping strategies or reaching medical help easier. QoL was found lower in graduates of primary school in the other studies.^{3,11} Interestingly, Areej et al. found that QoL was lower among the highly-educated caregivers.¹⁶

We did not detect a statistically significant difference between groups with regard to the duration of hospital stay. Areej et al. found that QoL impaired during hospital stay.¹⁶ Being away from home may lead to difficulties in daily living so the

result of Areej et al. seems more rationale. We did not question the caregivers in detail enough to be able to explain this result.

There was a statistically significant difference between the caregivers who were caring for the patient for 1-3 hours daily and for 8 hours or more daily with regard to physical role and pain subscales, the scores were better among the caregivers who spent less time with the patient. Duration of daily care giving was 19-24 hours in 39.3% of the caregivers, QoL was found lower among the caregivers who provided care for 19-24 hours daily in the study of Ovayolu et al., consistently with our study.³ Poorer QOL may be explained with the fact that spending a long time with the patient may reduce the tolerance and increase the worries of the caregiver. Time to spend for him/herself may also be reduced.

General health subscale score was higher among the caregivers who were living in the same city as the hospital. In the study of Ovayolu et al, 58.4% of the caregivers lived in the urban area and QoL was lower among them.³ Living in the same city with the hospital may enable the patient and the caregiver to be familiar with the environment so they may feel less anxiety, they may also receive better social support, spend less money so economic burden may be reduced.

We consider that conducting the study with the caregivers of the patients with hematologic malignancies may be the strength of the study because the small number of studies is available in literature conducted with the caregivers of this patient group despite a large number of the studies conducted with the caregivers of the patients with solid cancers and chronic diseases. However, the small number of the participants is a limitation of the study. Studies conducted with larger sample size would yield stronger results.

CONCLUSIONS

Cancer has become a common disease in the developing world. In accordance with the core competencies of family medicine, the cancer patient and the family should be evaluated together because cancer impairs not only the quality of life the cancer patient but also the family caregiver. Family physicians should take place in the center of and coordinate the interventions required for improving the quality of life of the caregivers.

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