Hopelessness and Quality of Life Levels in Hemodialysis Patients

Hemodiyaliz Hastalarında Umutsuzluk ve Yaşam Kalitesi Düzeyleri

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ABSTRACT

Objective: Hemodialysis treatment causes psychosocial problems like restrictions on social life, hopelessness, role changes, sadness, depression, anxiety and uncertainty about the future. So this problems may threat the quality of life. The purpose of this study was to determine the hopelessness and quality of life of the hemodialysis patients and the effective factors.

Methods: The sample of the study consisted of 320 hemodialysis patients from four hemodialysis centers in the province of Ankara. The data were collected by using Patient Information Form, Beck Hopelessness Scale and EQ-5D General Quality of Life Scale and EQ-5D Visual Analog Scale (EQ-5D VAS) in 2016.

Results: Mean scale score was 9.63±5.56 for Beck Hopelessness Scale, 0.57±0.32 for EQ-5D Index, and 57.0±22.20 for EQ-5D VAS. Most of the patient experienced physical, mental or social problems. The patients, who were widowed/divorced, were literate, and had another chronic disease, had higher Beck Hopelessness Scale mean score and lower EQ-5D VAS mean score. It was found that there was a positive correlation between Beck Hopelessness Scale scores and age, number of children, and treatment duration; and a negative correlation between EQ-5D VAS scores and age, number of children, and treatment duration. There was a negative correlation between Beck Hopelessness Scale scores and EQ-5D VAS scores.

Conclusion: The patients who were divorced/widowed, were literate and had another chronic disorder experienced more hopelessness and had lower level of general health. Increasing age, number of children, and treatment duration increased hopelessness and decreased general health. The increased hopelessness level also had a negative effect on the level of health.

Key Words: Hemodialysis, hopelessness, patients, quality of life

ÖZET

Amaç: Hemodiyaliz tedavisi sosyal yaşamın kısıtlanması, umutsuzluk, rol değişiklikleri, üzüntü, depresyon, anksiyete ve gelecek hakkında belirsizlik gibi psikososyal sorunlara neden olmaktadır. Bu problemler yaşam kalitesini tehdit edebilir. Bu çalışmanın amacı hemodiyaliz hastalarında umutsuzluk, yaşam kalitesi ve etkileyen faktörlerin belirlenmesidir.

Yöntem: Araştırmanın örneklemini Ankara il merkezinde bulunan dört hemodiyaliz ünitesinde tedavi görmekte olan 320 hasta oluşturmuştur. Veriler Hasta Bilgi Formu, Beck Umutsuzluk Ölçeği, EQ-5D Genel Yaşam Kalitesi Ölçeği ve EQ-5D VAS ile 2016 yılında toplanmıştır.

Bulgular: Ölçek puan ortalamaları Beck Umutsuzluk Ölçeği için 9.63±5.56, EQ-5D Index için 0.57±0.32 ve EQ-5D VAS için 57.0±22.20'dir. Hastaların çoğu fiziksel, ruhsal veya sosyal sorunlar yaşamaktadır. Boşanmış/dul, okur-yazar ve başka bir kronik hastalığı olan hastaların, Beck Umutsuzluk Ölçeği puan ortalaması daha yüksek ve EQ-5D VAS puan ortalaması daha düşüktür. Yaş, çocuk sayısı ve tedavi süresi ile Beck Umutsuzluk Ölçeği puanları arasında pozitif; aynı değişkenler ile EQ-5D VAS puanları arasında ise negatif bir ilişki bulunmuştur. Beck Umutsuzluk Ölçeği puanları ile EQ-5D VAS puanları arasında neatif bir ilişki bulunmuştur.

Sonuç: Boşanmış/dul, okur-yazar ve başka kronik hastalığı olan hastalar daha çok umutsuzluk yaşamaktadır ve genel sağlık düzeyleri daha düşüktür. Yaş, çocuk sayısı ve tedavi süresi arttıkça umutsuzluk düzeyi artmakta ve genel sağlık düzeyi düşmektedir. Umutsuzluk düzeyinin artması genel sağlık düzeyini de olumsuz etkilemektedir.

Anahtar Sözcükler: Hemodiyaliz, umutsuzluk, hastalar, yaşam kalitesi

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INTRODUCTION

Renal failure has an important place among chronic diseases. Chronic renal failure is loss of renal functions in a progressive and irreversible way. Treatment option for the end-stage renal failure is dialysis or renal transplantation. Because of the problems in finding donors, planning renal transplantation in these patients as a treatment is very difficult. Thus, dialysis treatment becomes necessary for these patients (1). It has been determined according to the Joint Report of Turkish Ministry of Health and Turkish Society of Nephrology that a total of 71.218 patients received RRT (Renal Replacement Therapy) and the most frequently administered RRT type is hemodialysis (HD) (78.37%) as of the end of 2014 (2). Hemodialysis treatment causes limitations such as dependence to the dialysis center, diet, drug use and psychosocial problems like restrictions on social life, role changes, sadness, despair, depression, anxiety and uncertainty about the future (1,3). Due to important advancements made in health field in parallel to the technological development today, life expectancy prolongs in chronic illness and the quality of life of the patients is becoming more important gradually (4). Quality of life is defined as the people's perception within situation, culture and values system they are in by the World Health Organization (WHO) (5). Quality of life is a concept including life satisfaction, subjective well-being, happiness, functional competence, social well-being, culture, value judgments, personal position, purposes as well as the personal responses to physical, psychological, and social effects (6,7). Various problems are seen in patients with continuous dialysis treatment related with the quality of life, such as reduction in physical functions, muscle weakness, fatigue, sleep disturbances, sexual dysfunction, anemia, nutrition disorders, infection, decreased social interactions and depression (8). In a study, physical limitations, coping difficulties, lack of support, uncertainty and fear of the future for the hemodialysis patients were the main occurring themes (9). Hopelessness about the mental change has an important place among psychosocial problems of the hemodialysis patients experience. Hope, giving power to people in coping with the challenges and overcoming the grief, is an important factor in human life. Hopelessness, the opposite of hope, is an emotion affecting the patients' compliance to treatment and motivations negatively (10) and leading to serious mental problems such as depression and suicide (11).

Hopelessness caused by the difficulties of coping with the disease, long-term treatment, and the problems may threat the quality of patient's life and may affect the general health perception negatively (12). Today, treatment team is a support force with psychosocial approaches for increasing number of hemodialysis patients. Nurses may minimize the negative effects of the long-term disease/treatment by considering individual differences while working with hemodialysis patients and may support the hope and the quality of life of the patients. The purpose of this study was to determine the hopelessness and quality of life of the hemodialysis patients and the effective factors.

METHODS

This study in descriptive cross-sectional survey type was conducted with patients undergoing hemodialysis in 1 university hospital, 2 public hospitals, and 1 private hospital located in the city center of Ankara. The sample of the study was determined according to Power Analysis and Sample Size Calculation formula. In the calculation of sample size, NCSS (Number Cruncher Statistical System) – Statistical and Power Analysis Software-PASS (Power Analysis and Sample Size) program was used. Sample size was determined by considering the mean scores of hopelessness (13-16) and the quality of life (10,17) levels in the literature. Sample size was calculated as minimum 241 people in deviation of 10% and at confidence level of 90% according to hopelessness level and minimum 249 people according to the quality of life level.

After performing the power analysis, the targeted minimum sampling size was reached. However, in order to increase the sample size in the study, all patients attending treatment centers were tried to be reached and the patients meeting the inclusion criteria were included in the study. Accordingly, 320 of totally 376 patients registered in hemodialysis centers where the study was conducted were included in the study. When the study was completed, power analysis was performed again according to the hopelessness and quality of life levels and confidence level (power) was determined as 99% with effect size of 10% and sample size of 320 people.

Inclusion criteria of the study were as follows; undergoing dialysis treatment for at least 6 months, being 18 years and over, being literate, having Turkish as a native language, and not having any problem in cognitive abilities. Exclusion criteria of the study were psychiatric diagnosis, renal transplantation and rejection history.

Before starting the study, written permission from the institutions and ethical approval from the ethics committee of the university (Number: 77082166-604.01.02) and the written informed consent from the patients were obtained. The researcher conducted face-to-face interview with voluntary patients and data collection tools (questionnaires) were filled. The study were conducted between January 2016 and April 2016.

The data of the study were collected with "Patient Information Form, Beck Hopelessness Scale, and EQ-5D General Quality of Life Scale": Patient Information Form: The form had 11 questions about socio-demographic characteristics of the patients as well as disease and treatment.

Beck Hopelessness Scale (BHS): It was developed by Beck, Weissman, Lester and Trexler (18) in order to measure the negative expectations of individuals concerning the future. Turkish validity and reliability adaptation of the scale was conducted by Durak and Palabıyıkoğlu (19). The scale consists of 20 items and each item is scored between 0-1 points. The highest score to be obtained from the scale is 20. High score signifies high hopelessness.

EQ-5D General Quality of Life Scale: It was developed by EuroQol group, a Western European Quality Survey Group, in 1987 (20). Reliability and validity analysis for the Turkish version was conducted by Eser et al. (21). The scale consists of two parts. The first part is EQ-5D index consisting of five subscales. These subscales are; "Movement, self-care, usual activities, pain/discomfort, and anxiety/depression". Answers given for each subscale are evaluated in 3-poin Likert-type as No problem, some problem, and severe problem. Index score calculated from the subscales varies between -0.59 and 1. While "0" point signifies to the death and "1" point signifies to the perfect health, negative values refer to the cases like unconsciousness and living bedridden. The second part, EQ-5D VAS, is a visual analog scale. Individuals give a value to their today's health status between 0-100 and mark them on this scale.

Statistical analyses were performed by using SPSS 20.0. The distribution of the data was determined by using Shapiro Wilk test. While continuous variables were expressed as mean±standard deviation, categorical variables were expressed as frequency and percentage. Continuous variables were compared by using Mann–Whitney U test for two groups. Kruskal–Wallis test was used to determine the differences between the three groups. When a difference was found between the groups, Mann-Whitney U-test with Bonferroni correction was used to determine the group creating the difference. Spearman correlation test was conducted for the correlations between variables. p<0.05 was considered as significant for all tests.

RESULTS

A total of 320 patients participated in the study. 51.9% of the patients were female, 66.6% were married, 38.1% were primary school graduates, 82.5% had children and 40.2% had 3-4 children. The mean age was 57.06±15.46 (min=19.0; max=88.0) years, mean disease duration was 9.66±7.54 (min=0.10; max=50.0) years and mean treatment duration was 6.55±5.64 (min=0.10; max=42.0) years.

It was determined that the problems the patients were experiencing about the disease and hemodialysis were related to mental changes. Table 1 shows the problems of the patients concerning the disease and hemodialysis therapy.

Table 1. Status and properties of having problems related to the disease and the treatment of the patients (n=320)

Variables			n	%
Disease	Have problems	Yes	297	92.8
		No	23	7.2
		Total	320	100.0
	Experienced problems* (*n*=297)	Mood changes	522	77.7
		Loss of role	77	11.0
		Social change	64	9.1
		Physical Change	36	5.2
		Total	699	100.0
Hemodialysis	Have problems	Yes	262	81.9
		No	58	18.1
		Total	320	100.0
	Experienced problems* (*n*=262)	Mood changes	546	70.1
		Physical Change	104	15.3
		Social change	79	12.1
		Loss of role	50	7.4
		Total	779	100.0

*Since multiple responses were given, percentages were multiplied and calculated over the *n*.

Regarding EQ-5D Index subscales, the patients experienced movement, self-care, usual activities, pain/discomfort, and anxiety/depression.Table 2 shows that more than half of the patients experienced anxiety/depression and pain/discomfort.

Table 2. Frequency values of EQ-5D Index subscales (n=320)

	No problem		Some problem		Severe problem	
	n	%	n	%	n	%
Movement	158	49.4	158	49.4	4	1.2
Self-care	188	58.8	121	37.8	11	3.4
Usual activities	134	41.9	109	34.1	77	24.1
Pain/Discomfort	183	57.2	113	35.3	24	7.5
Anxiety/Depression	103	32.2	181	56.6	36	11.3

Table 3 presents hopelessness level, EQ-5D general quality of life, and EQ-5D VAS mean scores of the patients participating in the study.

Table 3. BHS, EQ-5D Index, and EQ-5D VAS mean scores of the patients (n=320)

	Mean ± SD	Median (Q1 – Q3)	Min. ± Max.
BHS	9.63±5.56	9.00 (5.00 – 14.00)	0 ± 20
Feelings about the future	3.35±2.00	3.00 (2.00 – 5.00)	0 ± 6
Loss of motivation	3.35±2.15	3.00 (1.00 – 5.00)	0 ± 12
Future expectations	2.92±2.08	3.00 (1.00 – 4.00)	0 ± 7
EQ-5D Index	0.57±0.32	0.66 (0.31 – 0.66)	-0.35 ± 1
EQ-5D VAS	57±22.20	50 (50 – 70)	0 ± 100

Table 4 shows descriptive characteristics of the patients and their relations with BHS, EQ-5D Index, and EQ-5D VAS mean scores. BHS mean scores were higher in divorced/widowed patients compared to the married ones; in literate patients compared to patients who were graduated from primary school, high school, and undergraduate/ postgraduate education; and in patients diagnosed with another chronic disease compared to those without another chronic diagnosis.

EQ-5D VAS mean scores were lower in female patients than male patients, in divorced/widowed patients than married ones, and in literate patients than the high school graduate ones. EQ-5D VAS mean scores of the patients diagnosed with another chronic disease were lower than the others (Table 4).

Table 4. Patients' descriptive characteristics and their relations with BHS, EQ-5D Index and EQ-5D VAS mean scores

Variables	n (%)	BHS Mean ± SD	Median (Q1 – Q3)	EQ-5D Index Mean ± SD	Median (Q1 – Q3)	EQ-5D VAS Mean ± SD	Median (Q1 – Q3)
Gender							
Female	166 (51.9)	9.96±5.30	9.0 (6 – 14)	0.57±0.32	0.71 (0.31-0.81)	52.23±20.87	50 (40 – 60)
Male	154 (48.1)	9.27±5.81	9.0 (4 – 14)	0.57±0.31	0.64 (0.31–0.85)	62.10±22.51	60 (50 – 80)
Test		Z=-1.223; p=0.221		Z=-0.178; p=0.859		Z=-3.938; **p<0.001**	
Marital Status							
Married	213 (66.6)	9.19±5.65 [a]	9.0 (4 – 14)	0.57±0.31	0.64 (0.31-0.81)	58.02±23.72[a]	50 (50 – 75)
Single	38 (11.8)	9.50±5.82	8.0 (4.75– 4.5)	0.58±0.33	0.67 (0.30-0.85)	59.08±23.73[b]	60 (50- 80)
Divorced/ Widowed	69 (21.6)	11.06±4.93 [a]	11.0 (7.5 - 15)	0.58±0.33	0.71 (0.26-0.85)	52.61±15.04[a,b]	50 (40 – 60)
Test		X^2=6.716; **p=0.035**		X^2=0.315; p=0.854		X^2=6.053; **p=0.048**	
Number of children (n=264)*							
1-2	111 (42.0)	8.36±5.68 [a, b]	7.0 (3 – 13)	0.60±0.30	0.69 (0.36-0.85)	60.97±21.24[a,b]	50 (50 – 75)
3-4	106 (40.2)	10.29±5.33 [a]	10.0 (6-14.25)	0.53±0.32	0.62 (0.26-0.80)	52.83±23.55[a]	50 (40 – 66.25)
≥5	47 (17.8)	10.83±4.95 [b]	11.0 (8 - 15)	0.55±0.35	0.64 (0.31-0.82)	53.72±21.01[b]	50 (40 – 70)
Test		X^2=10.554; **p=0.005**		X^2=2.591; p=0.274		X^2=7.435; **p=0.024**	
Educational status							
Literate	72 (22.5)	12.14±5.21 [a, b, c]	12.0 (8.25 -17)	0.50±0.35	0.63 (0.19-0.80)	50.21±19.18 [a]	50 (40 – 60)
Primary school	122 (38.1)	9.43±5.10 [c]	9.0 (5 – 13.25)	0.59±0.30	0.69 (0.31-0.81)	56.93±24.12	50 (48.75– 70)
Middle school	44 (13.8)	9.57±5.86	8.5 (5 – 13)	0.56±0.35	0.62 (0.29-0.85)	58.30±24.26	50 (42.5 – 80)
High school	58 (18.1)	7.59±5.96 [a]	6.0 (2.75-3.25)	0.57±0.28	0.65 (0.32-0.80)	62.38±20.40 [a]	60 (50 – 80)
Undergraduate/ Graduate	24 (7.5)	8.17±4.72 [b]	8.0 (4.25-13.5)	0.70±0.32	0.85 (0.44-0.97)	62.08±16.08	60 (50 – 77.5)
Test		X^2=26.225; **p=0.000**		X^2=8.738; p=0.068		X^2=14.088; **p=0.007**	
Another chronic disease							
Yes	193 (60.3)	10.42±5.29	10.0 (6 – 14)	0.57±0.32	0.64 (0.31-0.85)	54.90±20.16	50 (40 – 70)
No	127 (39.7)	8.43±5.76	8.00 (4 – 13)	0.57±0.31	0.69 (0.33-0.81)	60.14±24.74	60 (50 – 80)
Test		Z=-3.319; **p=0.001**		Z=-0.012; p=0.990		Z=-2.439; **p=0.015**	

X^2=Kruskal Wallis test. Z=Mann–Whitney U test
a. b. c= There was a statistical difference between them according to Mann-Whitney U test with Bonferroni correction.(p<0.05)

Table 5 shows the correlation between some characteristics of the patients and their BHS, EQ-5D Index and EQ-5D VAS scores. A statistically significant and positive correlation was found between BHS scores and age, number of children and duration of hemodialysis therapy of the patients. As the age, number of children and duration of hemodialysis therapy increased, hopelessness level increased. A statistically significant negative correlation was found between age and EQ-5D Index scores. As the age increased, general quality of life level decreased.

A statistically significant negative correlation was found between age, number of children and duration of hemodialysis and EQ-5D VAS scores. As the age, number of children and duration of hemodialysis therapy increased, general health level increased. A statistically significant negative correlation was found between BHS scores and EQ-5D VAS scores of the patients. As their hopelessness level increased, the patients' general health level decreased. No statistically significant correlation was found between BHS scores and EQ-5D Index scores of the patients.

Table 5. BHS. EQ-5D Index and EQ-5D VAS score relations with some characteristics of the patients (n=320)

	BHS r* p	EQ-5D Index r* p	EQ-5D VAS r* p
Age	0.232 **0.000**	-0.129 **0.021**	-0.118 **0.035**
Number of children	0.208 **0.001**	-0.055 0.330	-0.459 **0.000**
Treatment duration	0.112 **0.045**	-0.040 0.478	-0.131 **0.019**
BHS	- -	-0.055 0.330	-0.459 **0.000**

* Spearman correlation coefficient.

DISCUSSION

BHS Scores According to Descriptive Characteristics

In this study, hopelessness, quality of life levels and the effective factors were investigated among patients undergoing hemodialysis. Hopelessness mean scores of the patients varied between 8.2±5.1 and 12.76±3.04 in the literature (13-16). BHS mean scores of the patients were in the range of (9.63±5.56) in this study, too. Different hopelessness levels in the studies may vary according to the patients' demographic and disease/treatment characteristics.

In the present study, as the age increased, hopelessness level increased. Hopelessness level of the patients with another chronic disease was higher. This suggested that the chronic diseases increasing with age played a role in hopelessness. Similarly, it was also determined in other studies that as the age increased, the hopelessness level increased (13,15). In some studies, age was stated not to affect the hopelessness level (13-14).

In the present study, hopelessness level of divorced/widowed patients was found to be higher than the married ones. This can be explained by low social support of divorced/widowed patients and by taking responsibilities alone in many areas of life. In fact, the hopelessness levels of the patients who cannot have support when they need were observed to be higher in the present study. In this case, it can be asserted that the social support played a role in hopelessness level. Unlike the present study, it was suggested in other studies that the marital status did not affect the hopelessness level (13,22).

In the present study, the hopelessness levels of the patients who had 3 and more children were found to be higher than the ones who had 1-2 children. As the number of children increased, hopelessness level increased. Responsibility and moral/material burden increasing in parallel with the number of children may increase the hopelessness. In the present study, 92.8% of the patients stated that the disease caused mental, physical, social problems and they suffered loss of role while 81.9% stated that hemodialysis therapy caused these problems .It was thought that the patients with more children were affected by these problems more and they experienced hopelessness. In a study conducted similarly, hopelessness level of those with 5 and more children was found to be higher than others (15). In another study conducted with those undergoing hemodialysis or transplantation, the existence of the people who were dependent did not affect the hopelessness level (22).

In the present study, hopelessness level of the literate patients was found to be higher. It can be asserted that as the patients' educational level increased, they reached more information about the treatment and increased their hopes. In addition, increased education level may ease to cope with the problems. Similarly, it was also determined in some other studies that as the educational level increased, hopelessness level decreased (13,15).

The fact that hopelessness level did not show any difference between genders in the present study made us think that the disease and hemodialysis therapy affected the male and female patients similarly in terms of social, physical, and mental aspects. It was also observed in some other studies that the gender did not create a significant difference in the hopelessness level (14,22). Unlike the present study, women were found to be more hopeless and pessimist compared to men in some other studies (13,15).

It was determined that the hopelessness level increased with the increased treatment duration in the present study. As the treatment duration of the patients increased, patients may lose their hopes for the treatment, their expectations about future and beliefs concerning the recovery might decrease. In some other studies conducted similarly, it was found that patients undergoing dialysis for more than 4 years experienced more hopelessness (23).

EQ-5D Index and EQ-5D VAS Scores according to Descriptive Characteristics

In the present study, it was found that EQ-5D Index (General Quality of Life) mean scores of the patients were 0.57±0.32 and the EQ-5D VAS (General Health Status) mean scores were 57±22.20. When the highest scores to be obtained from the scales are considered, these mean scores can be asserted to be at moderate level. In addition, according to EQ-5D Index, more than half of the patients experienced movement, usual activities (work, study, household chores, family or spare time activities), anxiety/depression and almost half of them had moderate or severe problems about self-care and pain/discomfort. Almost all of the patients stated to experience the disease-related problem; whereas 81.9% stated to experience the treatment-related problems. These experienced problems explained the moderate level of general quality of life and health status of the patients.

It was determined in the present study that the women evaluated their general health status lower than men. The fact that women had more role and responsibilities within the family compared to men might lead them to be affected by the disease/treatment more (24).

In the present study, it was determined that as ages of the patients increased, their general quality of life and general health status decreased. This might be associated with increased energy loss, movement restriction, sleep disorders and death thoughts with the age (25). In addition, hopelessness increased with increased age, which might have affected the general health status negatively. Similarly it was stated in some studies that the quality of life impaired with the age (25).

In our study, it was determined that marital status was not effective on general quality of life. However, general health status levels of divorced/widowed patients were determined to be lower. Also, hopelessness levels of divorced/widowed patients were higher in the present study, and as the number of children increased, general health level decreased. Almost all of the patients stated that they experienced problems in many areas of their lives due to the disease. Divorced/widowed patients may have more difficulties to cope with these problems. In a study using a different quality of life scale, marital status was found not to affect the quality of life (26). It was determined in another study that the single ones had higher quality of life (27).

In the present study, educational status did not affect the quality of life and general health status of literate patients was lower. Literate patients may have difficulties in obtaining information about the disease/treatment and in coping with the problems. Similarly, in some studies, quality of life of the patients with low educational level is found to be low (28).

It was found in the present study that as the duration of hemodialysis therapy increased, the general health status impaired. Living as dependent on hemodialysis device for four hours in 3 days a week for years may have affected the general health perception negatively. Still receiving treatment might have increased the general health perception of the patients negatively. Also, the fact that hopelessness increased with increased treatment duration in the present study might have affected the general health perception negatively. Similarly, it was found in some studies that as the dialysis duration increased, the quality of life impaired (27,29). In another study, the quality of life was observed to enhance for the patients undergoing dialysis treatment for a long time (more than 3.5 years) (8).

In the present study, general health level of the patients with chronic disease was lower than the others. Also, a great majority of the patients was reported to experience physical, mental, and social problems related with the disease and its treatment. Adding the other chronic diseases to these problems may also impair the quality of life. Similarly, in some studies comorbid disease was found to be associated with the low quality of life (12).

Correlation of BHS with EQ-5D Index and EQ-5D VAS

It was found that as their hopelessness level increased, the patients' general health level decreased in the present study. Similarly, it was determined in a study that as the hopelessness level increased, the life satisfaction decreased (13); whereas, in another study, it was found that there was a significant correlation between the hope and health and the feeling of hopelessness was a threat for the quality of life (30). Hopelessness was found to impair the quality of life in another study (14).

CONCLUSION

As age, number of children and the treatment duration increased, hopelessness increased; divorced/widowed and literate patients with another chronic disease experienced more hopelessness. General health status of female, divorced/widowed, and literate patients with another chronic disease was lower. General health status decreased as the number of children and the treatment duration increased. General quality of life and general health status reduced with increasing age. It was also observed in the present study that more than half of the patients experienced movement, usual activities (work, study, household chores, family or spare time activities), anxiety/depression and almost half of them experienced moderate or severe problems about self-care and pain/discomfort. A great majority of the patients in the present study stated that they experienced a physical, mental, social or role-related problem depending on the disease and its treatment. General health status reduced when the hopelessness increased.

We recommend focusing on these characteristics that influence hopelessness and general health-related quality of life by the treatment team through early intervention and patient support with a psychosocial approach. Considering that patients who did not receive the training on hemodialysis had higher levels of hopelessness, it is possible to provide an extensive training on the effects and side effects of the treatment to patients. Majority of the patients experienced mental problems due to the disease and treatment. As their levels of hopelessness increased, the general health status decreased. Thus, coping with stress programs can be conducted and its effect can be evaluated in order to support the mental condition and general health status of patients. Since the disease and treatment cause physical, mental and social problems, as well as problems about loss of role in patients, patients can be evaluated from this aspect. It is also possible to create interaction groups with individuals suffering from the same problem and evaluate their effects.

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