

Stress Coping Attitudes of Hemodialysis and Peritoneal Dialysis Patients

Hemodiyaliz ve Periton Diyalizi Hastalarının Stresle Baş Etme Tutumları

ABSTRACT

OBJECTIVE: The aim of this study was to evaluate the stress coping strategies of hemodialysis and peritoneal dialysis patients.

MATERIAL and METHODS: This cross sectional study included 100 hemodialysis and peritoneal dialysis patients from Erciyes University Health Application and Research Centre and a private dialysis centre. Patient information form and the Assessment Scale for Coping Attitudes (COPE), which included the descriptive properties of the patients and information on the disease, were used to collect the data. Student' t test and analysis of variance were used in statistical analysis.

RESULTS: Emotional focused coping attitude was the most frequently used coping attitude by the hemodialysis and the peritoneal dialysis patients. The first coping method was religious coping, the second was positive reinterpretation and growth, and the third was active coping method which is a problem-oriented coping method. The mean score of 'Use of emotional social support' of hemodialysis patients was statistically significantly lower when compared with the peritoneal dialysis patients', and the 'denial' mean score statistically significantly higher. There was a negative correlation between age and planning COPE, and a positive correlation between chronic kidney failure duration and behavioral disengagement.

CONCLUSION: In our study, emotional-oriented coping attitude was the most frequently used coping attitude in both hemodialysis and peritoneal dialysis patients. Religious coping was the first amongst the coping methods.

KEY WORDS: Hemodialysis, Peritoneal dialysis, Coping attitudes

ÖZ

AMAÇ: Çalışmada hemodiyaliz ve periton diyalizi uygulanan hastaların stresle baş etme tutumlarının incelenmesi amaçlanmıştır.

GEREÇ ve YÖNTEMLER: Kesitsel tipteki bu çalışma, Mayıs-Temmuz 2016 tarihlerinde Erciyes Üniversitesi Sağlık Uygulama ve Araştırma Merkezi'ne ve özel diyaliz merkezine, hemodiyaliz ve SAPD için başvuran 100 hasta üzerinde yürütülmüştür. Veri toplama aracı olarak; hastaların tanıtıcı özelliklerini ve hastalığa ait bilgileri içeren Hasta bilgi formu ve Assessment Scale for Coping Attitudes (COPE) kullanılmıştır. İstatistiksel analizinde Student t testi, varyans analizi uygulanmıştır.

BULGULAR: Hemodiyaliz ve Sürekli Periton Diyalizi (SAPD) uygulanan hastaların en sık duygusal odaklı başa çıkma tutumlarını kullandıkları tespit edilmiştir. Başa çıkma yöntemlerinden ilk sırayı dini olarak başa çıkma, ikinci sırayı pozitif yeniden yorumlama ve gelişme, üçüncü sırada ise sorun odaklı başa çıkma yöntemlerinden aktif başa çıkma yöntemi yer almıştır. Hemodiyaliz hastalarının "Duygusal sosyal destek kullanımı" puan ortalamaları SAPD hastalarına göre anlamlı düzeyde düşük, "İnkar" puan ortalamaları ise anlamlı düzeyde yüksek bulunmuştur. Yaş ile plan yapma COPE alt boyut puanları arasında negatif yönde anlamlı ilişki, kronik böbrek yetmezliği hastalık süresi ile davranışsal olarak boş verme COPE alt boyut puanları arasında pozitif yönde anlamlı ilişki bulunmuştur.

SONUÇ: Çalışmamızda, her iki hasta grubunun da en sık duygusal odaklı başa çıkma tutumlarını kullandıkları tespit edilmiştir. Başa çıkma yöntemlerinden ilk sırayı dini olarak başa çıkma almıştır.

ANAHTAR SÖZCÜKLER: Hemodiyaliz, Periton diyalizi, Baş etme tutumları

Selçuk MISTIK¹
Demet ÜNALAN²
Mehmet KAYA¹
Muhsin KARADUMAN¹
Bülent TOKGÖZ³

- 1 Erciyes University Faculty of Medicine, Department of Family Medicine, Kayseri, Turkey,
- 2 Erciyes University Halil Bayraktar Health Services Vocational College, Kayseri, Turkey
- 3 Erciyes University Faculty of Medicine, Department of Internal Medicine, Kayseri, Turkey



Received : 06.08.2016

Accepted : 18.08.2016

Correspondence Address:

Selçuk MISTIK
 Erciyes Üniversitesi Tıp Fakültesi,
 Aile Hekimliği Anabilim Dalı,
 Kayseri, Turkey
 Phone : + 90 532 343 84 50
 E-mail : selcukmistik@gmail.com

INTRODUCTION

End-stage renal disease is a chronic life-threatening disease and it has been stated that hemodialysis (HD) imposes a variety of physical and psychosocial stressors on patients with this disease (1). The incidence of kidney failure is increasing worldwide and so too is the global burden of this illness (2, 3).

Knowledge of the relationships between socio-demographic factors, stressful experience and coping behavior for individuals with chronic kidney disease (CKD) is an important area of inquiry as factors such as age, gender and level of education may affect chronic disease management, access to resources and health services. Knowing more about these factors will assist healthcare professionals in developing and implementing educative and supportive interventions for individuals with CKD which are recommended in clinical practice guidelines (2). The study of socio-demographic differences in stressors and coping amongst patients with renal disease remains limited (2).

Coping has been described as the usual strategies used by the individual to deal with stress and resolve daily problems (4, 5). The method of coping with these problems will determine the extent to which the disease will affect the patient's life, adaptation and adjustment to the disease and the stress resulting from the demands that they must face. In hemodialysis patients, coping has a significant bearing on adaptation to the disease and adherence to treatment (4, 6, 7).

There are few studies on the stress coping methods in dialysis patients. The aim of this study was to evaluate and compare the stress coping methods in hemodialysis and peritoneal dialysis patients by using a new scale entitled the Assessment Scale for Coping Attitudes (COPE).

MATERIALS and METHODS

This cross-sectional study was conducted between May-July 2016. The patients included in this study were hemodialysis and peritoneal dialysis patients who presented to the Erciyes University Health Application and Research Centre, and to a private dialysis centre. The patients aged 18 and older, who were able to cooperate, and who agreed to give written consent were included in the study. The patients had no diagnosed psychiatric diseases. There were 50 hemodialysis and 50 peritoneal dialysis patients. Of the peritoneal dialysis patients, 40 were continuous ambulatory peritoneal dialysis and 10 were ambulatory peritoneal dialysis patients. The data collection tools were applied by face-to-face interviews by the researchers after dialysis.

This study was approved by the Ethics Committee of Erciyes University, Faculty of Medicine and written informed consent was obtained from the participants.

Data Collection Tools

The Patient information form and the Assessment Scale for Coping Attitudes (COPE), which included the patients' descriptive properties and information about the disease, were used as data collection tools.

Patient Information Form

The patient information form included the patients' age, gender, marital status, education level, occupation, income, and house type. In addition, other chronic diseases, duration of renal disease, and the duration and frequency of hemodialysis or peritoneal dialysis were also asked.

Coping Scale

In this study, we used a stress coping attitude scale which is comprised of 60 questions and developed to evaluate peoples response to stress in different ways. The Turkish validation of this scale was performed by Agargun et al. (8). Fifteen subscales each consisting of four items were problem-oriented coping, (active coping, planning, restraint, suppression of competing activities and using instrumental social support), emotional oriented coping (use of emotional social support, positive reinterpretation and growth, acceptance, humor and religious coping), dysfunctional coping (focus on and venting of emotions, denial, behavioral disengagement, mental disengagement, substance use). The subscales were graded as; 1. Never do such a thing, 2. Rarely do so, 3. Moderately do so, and 4. Frequently do so. The score varied between 4 and 16. The increase in the subscale scores gives an idea about the most frequently used coping strategy by the persons (9-11). In our study, COPE Cronbach's Alpha (α) value was found as 0.816.

Statistical Analysis

IBM SPSS Statistics 20.0 Statistical Package was used in statistical analysis. Student's t-test was used to compare two independent groups, and analysis of variance was used to compare more than two groups. The Tukey test (post hoc) was used to find the group causing the difference. Pearson correlation coefficient was calculated to evaluate the correlation between the variables. The value $p < 0.05$ was accepted as statistically significant.

RESULTS

The mean age of hemodialysis and peritoneal dialysis patients was 53.1 ± 14.2 , and the median (min-max) was 56.5 (18-78). Of the patients, 61.0% were male, 75.0% married, 57.0% primary school graduates, 37.0% retired, 55.0% had income at the minimum wage level, and 59.0% were living in flats.

Of the patients, 82 (82.0%) had chronic diseases other than chronic kidney disease, 32.9% had hypertension, and 31.7% diabetes and hypertension (Table I). The mean duration after the start of hemodialysis was 7.6 ± 6.3 years, median (min-max) 6.0 (2 months-24years), mean peritoneal dialysis duration was 3.6 ± 2.6 years, median (min-max) 3 years (3 months-10 years).

The COPE subscale mean values of hemodialysis and peritoneal dialysis patients are presented at Table II. Emotional focused coping attitude was the most frequently used coping attitude by the hemodialysis and the peritoneal dialysis patients. The first emotional-oriented coping method was religious

Table I: The patients' disease-related properties.

Properties	n	%
Co morbid diseases (n=77)		
Hypertension	27	32.9
Diabetes and hypertension	26	31.7
Diabetes, hypertension and heart failure	10	12.2
Others*	19	23.2
Chronic renal failure duration/years		
X± SD	8.4±5.9	
Median (min-max)	7.0 (1-25)	
Hemodialysis treatment duration/years		
X± SD	7.6±6.3	
Median (min-max)	6.0 (2m-24y)	
Peritoneal dialysis duration/years		
X± SD	3.6±2.6	
Median (min-max)	3 (3m-10y)	

* Heart failure, hypertension and goitre, hypertension and epilepsy, hypertension and heart failure, asthma.

coping, the second was positive reinterpretation and growth, and the third was active coping method which is a problem-oriented coping method. The most frequently used dysfunctional coping methods were focus on and venting of emotions and mental disengagement (Table II).

The mean score of 'Use of emotional social support' of hemodialysis patients was statistically significantly lower when compared with the peritoneal dialysis patients', and the 'denial' mean score statistically significantly higher ($p<0.05$) (Table II).

Problem orientation and emotional expression, and use of emotional social support mean score was higher in female patients ($p<0.05$), and the mean score of restraint was statistically significantly higher in married patients ($p<0.05$).

According to professions, there was a statistically significant difference at acceptance mean scores ($p<0.01$). Self employed patients' acceptance mean score was statistically significantly lower when compared with the other professions ($p<0.001$) (Table III).

Table II: COPE subscales mean scores of hemodialysis and peritoneal dialysis patients.

COPE subscales	Hemodialysis X±SD	PD* X±SD	p
Problem-oriented coping			
Using instrumental social support	10.8±3.3	11.1±2.3	0.602
Active coping	11.4±2.6	11.7±2.0	0.607
Restraint	9.7±1.9	10.3±1.4	0.120
Suppression of competing activities	9.9±2.0	10.5±1.3	0.079
Planning	11.0±2.6	10.8±1.9	0.729
Emotion-oriented coping			
Positive reinterpretation and growth	12.6±2.1	12.7±1.5	0.913
Religious coping	15.1±2.0	16.4±5.4	0.123
Humor	9.0±3.4	9.0±4.0	0.936
Use of emotional social support	10.5±3.0	11.6±2.0	0.042
Acceptance	10.6±2.6	11.4±2.0	0.074
Dysfunctional coping			
Mental disengagement	10.2±2.7	10.6±2.0	0.423
Focus on and venting of emotions	10.7±2.4	11.4±2.2	0.132
Denial	8.1±2.4	6.5±2.1	0.001
Substance use	5.1±2.6	4.4±1.0	0.073
Behavioral disengagement	7.3±2.2	7.0±2.2	0.588

* Peritoneal dialysis.

Table III: COPE subscales mean scores of hemodialysis and peritoneal dialysis patients according to variables.

Variables		COPE subscales															
		n(%)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Sex	Female	39 (39.0)	12.4±1.7	10.7±2.5	11.6±2.1	11.3±2.3	11.1±2.2	7.3±2.1	16.7±6.0	9.1±3.8	7.6±2.2	10.1±1.5	11.8±2.3	4.8±1.5	11.0±2.0	10.2±1.5	10.5±2.3
	Male	61 (61.0)	12.8±1.9	10.2±2.3	10.6±2.3	10.8±3.2	11.9±2.3	7.3±2.6	15.1±1.9	8.9±3.7	6.9±2.2	9.9±1.8	10.6±2.7	4.7±2.3	10.9±2.6	10.2±1.8	11.1±2.3
	p		0.370	0.341	0.036	0.458	0.092	0.846	0.051	0.896	0.080	0.715	0.025	0.845	0.870	0.998	0.235
Educational Level	Literate or illiterate	16 (16.0)	12.1±0.9	10.4±3.1	11.3±2.1	10.8±1.7	10.6±2.1	6.8±1.9	16.0±0.0	7.0±2.5	8.4±1.2	10.6±1.6	11.5±1.2	4.3±0.8	10.9±2.0	10.0±0.9	9.6±2.2
	Primary school	56 (56.0)	12.8±1.9	10.5±2.2	11.0±2.5	11.2±3.0	11.8±2.1	7.2±2.5	16.2±5.1	9.4±3.9	6.9±2.5	9.9±1.7	10.9±2.9	4.8±2.4	11.1±2.6	10.2±1.8	11.1±2.0
	High school University	16 (16.0)	12.4±2.0	10.7±2.3	10.5±2.0	11.4±2.7	11.9±2.8	8.3±2.6	15.7±0.6	8.9±4.0	7.2±1.5	9.7±1.4	11.4±2.0	4.7±1.6	10.7±2.2	10.2±1.9	11.2±2.8
p		12 (12.0)	12.9±2.0	9.5±1.9	11.4±2.3	9.6±3.5	11.3±2.6	7.3±2.3	13.3±3.3	9.6±3.4	6.7±2.3	10.0±1.7	10.7±3.5	5.2±1.8	11.2±2.0	10.4±1.7	10.9±2.6
			0.470	0.530	0.707	0.296	0.284	0.352	0.171	0.122	0.104	0.424	0.790	0.684	0.940	0.940	0.118
Marital status	Married	75 (75.0)	12.6±1.7	10.6±2.3	11.1±2.3	10.8±2.8	11.5±2.4	7.3±2.5	15.9±4.7	9.0±3.7	7.4±2.2	10.2±1.7	11.1±2.2	4.7±1.8	11.1±2.1	10.2±1.6	10.8±2.3
	Single	25 (25.0)	12.8±2.2	9.9±2.4	10.9±2.5	11.5±3.1	11.6±2.0	7.2±2.2	15.4±1.1	9.1±3.9	6.6±2.1	9.4±1.5	11.1±3.6	4.8±2.5	10.6±2.9	10.1±2.0	11.2±2.4
	p		0.704	0.196	0.748	0.285	0.788	0.739	0.583	0.889	0.116	0.037	0.986	0.909	0.406	0.737	0.483
Profession	Retired	37 (37.0)	12.6±1.8	10.6±2.3	10.9±2.1	11.3±2.8	11.8±2.2	6.9±2.6	15.4±1.5	9.3±3.8	6.9±2.1	10.2±1.5	11.2±2.6	4.6±2.0	11.9±2.1 ^a	10.2±1.7	10.9±2.2
	House wife	31 (31.0)	12.6±1.5	10.6±2.5	11.7±2.2	11.4±2.1	11.0±2.1	7.4±2.2	17.1±6.7	8.7±3.7	7.7±2.2	10.1±1.6	11.7±2.2	4.6±1.2	10.8±1.9 ^a	10.2±1.4	10.5±1.2
	Self employed	10 (10.0)	13.0±1.6	10.4±3.0	10.1±2.8	11.1±3.6	12.5±1.9	8.5±2.3	15.6±0.7	8.3±2.6	6.4±2.1	9.2±2.1	10.4±2.5	4.0±0.0	8.5±2.7 ^b	10.0±2.5	11.9±1.7
p	Others*	22 (22.0)	12.6±2.4	9.8±2.1	10.6±2.5	9.8±3.4	11.4±2.9	7.2±2.4	14.5±2.5	9.1±4.0	7.1±2.3	9.8±1.8	10.3±3.0	5.4±3.0	10.8±2.3 ^a	10.2±1.8	10.8±2.7
			0.930	0.550	0.170	0.184	0.248	0.335	0.124	0.840	0.315	0.381	0.199	0.248	<0.001	0.984	0.452
Income	Minimum wage	55 (55.0)	12.9±1.8 ^a	10.3±2.5	11.3±2.3	11.2±2.9 ^a	11.7±2.5	7.5±2.3	16.2±5.1	8.7±3.5	7.2±2.1	9.9±1.6	11.4±2.7	4.7±2.0	10.5±2.3 ^a	10.0±1.6	11.1±2.5
	1000-2000 TL	37 (37.0)	12.6±1.6 ^a	10.6±2.2	10.9±2.5	10.6±2.7 ^{ab}	11.6±2.2	7.1±2.7	15.4±1.7	9.5±4.1	7.1±2.3	10.3±1.8	10.7±2.5	4.6±2.1	11.8±2.2 ^b	10.5±2.0	10.7±2.0
	2001-3000 TL	8 (8.0)	10.7±2.1 ^b	10.3±2.0	9.8±1.4	8.9±2.6 ^b	10.6±1.8	7.4±1.7	14.0±2.8	8.8±2.8	7.5±2.2	9.1±1.6	10.4±2.3	5.3±2.1	10.3±2.4 ^{ab}	9.6±1.2	9.7±1.2
p			0.006	0.792	0.207	0.027	0.504	0.737	0.327	0.561	0.871	0.201	0.393	0.737	0.029	0.269	0.262
Smoking	Still smoking	21 (21.0)	12.9±1.7	10.3±2.4	10.3±2.5	11.0±3.0	12.5±2.0	7.0±3.2	15.5±1.0	8.7±3.6	6.7±2.6	9.7±1.8	10.5±2.9	4.8±2.6	11.5±2.6	10.5±2.0	11.4±2.1
	Never smoked	39 (39.0)	12.4±1.8	10.5±2.3	11.6±1.8	11.3±2.2	11.1±2.4	7.3±2.1	16.7±6.0	9.1±3.8	7.5±2.2	10.2±1.6	11.8±1.7	4.7±1.5	11.1±2.1	10.1±1.5	10.7±2.3
	Gave up	40 (40.0)	12.7±1.9	10.3±2.4	10.8±2.5	10.7±3.3	11.5±2.3	7.5±2.3	15.0±2.2	9.1±3.8	7.1±2.0	9.9±1.7	10.7±3.0	4.7±2.1	10.6±2.4	10.1±1.8	10.8±2.4
p			0.615	0.942	0.102	0.714	0.093	0.767	0.176	0.930	0.448	0.450	0.067	0.974	0.358	0.578	0.530
Chronic disease	Yes	82 (82.0)	12.6±1.7	10.4±2.4	11.1±2.3	11.0±2.6	11.5±2.3	7.2±2.5	15.5±1.3	8.9±3.7	7.2±2.1	9.9±1.6	11.2±2.3	4.7±2.1	11.0±2.3	10.2±1.7	10.7±2.3
	No	18 (18.0)	12.7±2.4	10.3±2.1	10.4±2.3	10.8±3.8	11.6±2.4	7.7±1.6	16.8±9.4	9.2±3.6	6.8±2.4	10.3±1.8	10.5±3.5	4.5±1.4	10.9±2.7	9.9±1.5	11.5±2.3
	p		0.833	0.880	0.256	0.798	0.886	0.350	0.578	0.771	0.419	0.352	0.437	0.702	0.944	0.521	0.206

¹ Positive reinterpretation and growth, ² Mental disengagement, ³ Focus on and venting of emotions, ⁴ Using instrumental social support, ⁵ Active coping, ⁶ Denial, ⁷ Religious coping, ⁸ Humor, ⁹ Behavioral disengagement, ¹⁰ Restraint, ¹¹ Use of emotional social support, ¹² Substance use, ¹³ Acceptance, ¹⁴ Suppression of competing activities, ¹⁵ Planning.
* Employee, officer, unemployed, alphabetical superscripts stand for statistical significance if groups are different (a and b are different, ab is not).

When the COPE sub dimension scores were compared according to the patients' income levels, the patients with monthly income level of 2001-3000 TL had statistically significantly lower mean values at 'positive reinterpretation and growth', 'acceptance' and 'use of emotional social support' ($p<0.05$) (Table III).

There was no statistically significant difference when the COPE sub dimension scores were compared according to the patients' educational level, smoking and chronic disease ($p>0.05$) (Table III).

There was a negative correlation between age and planning COPE subscale in our study ($p<0.05$) (Table IV). In addition, there was a positive correlation between chronic kidney failure duration and behavioral disengagement ($p<0.05$) (Table IV).

DISCUSSION

This study demonstrated that; [1] Emotional focused coping attitude was the most frequently used coping attitude by the hemodialysis and the peritoneal dialysis patients, [2]. The first emotional-oriented coping method was religious coping, the second was positive reinterpretation and growth, and the third was active coping method which is a problem-oriented coping method. [3] The most frequently used dysfunctional coping methods were focus on and venting of emotions and mental disengagement, [4] The mean score of 'Use of emotional social support' of hemodialysis patients was statistically significantly lower when compared with the peritoneal dialysis patients', and the 'denial' mean score statistically significantly higher, [5] Problem orientation and emotional expression, and use of emotional social support mean score was higher in women patients, [6] and the mean score of restraint was statistically significantly higher in married patients.

There are few studies on the stress coping attitudes of the dialysis patients. This study is the first time where COPE was used in dialysis patients. In addition, a comparison between the hemodialysis and peritoneal dialysis patients was performed and the differences between the two groups was demonstrated. The limitation of the study was that the patient group was selected from only one city and from two centres.

There are few studies on the coping attitudes of dialysis patients. One of these was conducted by Linqvist et al. in 1998, where coping was measured on the Jalowiec Coping Scale in 30 hemodialysis and 26 peritoneal dialysis patients (12). The results of their study showed that an optimistic coping style was the most widely adopted by men and women in both groups, and this style was also considered to be the most effective in terms of dealing with stressful treatment aspects. The hemodialysis group used more evasive coping strategies than the peritoneal dialysis group. In our study, the mean score of 'Use of emotional social support' of hemodialysis patients was statistically significantly lower when compared with the peritoneal dialysis patients', and the 'denial' mean score statistically significantly higher.

Table IV: The correlations of COPE subscales scores of hemodialysis and peritoneal dialysis patients according to different variables.

Variables	COPE subscales														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Age	$r=-0.105$ $p=0.300$	$r=-0.035$ $p=0.728$	$r=-0.013$ $p=0.894$	$r=-0.126$ $p=0.212$	$r=-0.115$ $p=0.254$	$r=-0.066$ $p=0.512$	$r=-0.050$ $p=0.622$	$r=-0.158$ $p=0.117$	$r=-0.051$ $p=0.616$	$r=-0.068$ $p=0.504$	$r=-0.076$ $p=0.455$	$r=-0.065$ $p=0.519$	$r=-0.032$ $p=0.754$	$r=-0.124$ $p=0.218$	$r=-0.212$ $p=0.034$
Kidney disease duration	$r=0.087$ $p=0.387$	$r=0.023$ $p=0.818$	$r=-0.059$ $p=0.557$	$r=0.055$ $p=0.587$	$r=0.057$ $p=0.571$	$r=0.051$ $p=0.617$	$r=-0.011$ $p=0.914$	$r=-0.026$ $p=0.798$	$r=0.241$ $p=0.016$	$r=0.036$ $p=0.723$	$r=0.108$ $p=0.286$	$r=-0.046$ $p=0.652$	$r=0.093$ $p=0.360$	$r=0.066$ $p=0.517$	$r=0.062$ $p=0.537$
Peritoneal dialysis /years	$r=-0.039$ $p=0.786$	$r=0.212$ $p=0.139$	$r=0.246$ $p=0.086$	$r=0.079$ $p=0.586$	$r=0.104$ $p=0.471$	$r=-0.027$ $p=0.852$	$r=0.196$ $p=0.173$	$r=-0.039$ $p=0.786$	$r=0.101$ $p=0.486$	$r=0.050$ $p=0.732$	$r=0.006$ $p=0.970$	$r=-0.091$ $p=0.530$	$r=0.028$ $p=0.849$	$r=0.100$ $p=0.489$	$r=0.023$ $p=0.871$
Peritoneal dialysis treatment duration/day	$r=-0.074$ $p=0.607$	$r=0.073$ $p=0.614$	$r=0.059$ $p=0.686$	$r=0.245$ $p=0.086$	$r=0.192$ $p=0.182$	$r=0.084$ $p=0.560$	$r=-0.013$ $p=0.926$	$r=-0.173$ $p=0.229$	$r=0.018$ $p=0.903$	$r=0.024$ $p=0.867$	$r=0.230$ $p=0.108$	$r=-0.070$ $p=0.630$	$r=0.158$ $p=0.274$	$r=0.104$ $p=0.471$	$r=0.052$ $p=0.717$
Hemodialysis /years	$r=0.218$ $p=0.128$	$r=0.070$ $p=0.627$	$r=-0.100$ $p=0.490$	$r=0.047$ $p=0.748$	$r=0.182$ $p=0.206$	$r=0.019$ $p=0.896$	$r=0.060$ $p=0.677$	$r=0.125$ $p=0.386$	$r=0.140$ $p=0.331$	$r=0.157$ $p=0.275$	$r=-0.197$ $p=0.169$	$r=-0.081$ $p=0.577$	$r=0.253$ $p=0.076$	$r=0.224$ $p=0.118$	$r=0.189$ $p=0.188$
Hemodialysis duration/week	$r=0.051$ $p=0.724$	$r=0.031$ $p=0.833$	$r=-0.133$ $p=0.358$	$r=0.001$ $p=0.996$	$r=-0.036$ $p=0.806$	$r=0.139$ $p=0.335$	$r=-0.102$ $p=0.480$	$r=0.129$ $p=0.374$	$r=-0.009$ $p=0.950$	$r=0.210$ $p=0.143$	$r=0.067$ $p=0.645$	$r=0.035$ $p=0.807$	$r=0.201$ $p=0.161$	$r=0.197$ $p=0.171$	$r=0.089$ $p=0.539$

¹ Positive reinterpretation and growth, ² Mental disengagement, ³ Focus on and venting of emotions, ⁴ Using instrumental social support, ⁵ Active coping, ⁶ Denial, ⁷ Religious coping, ⁸ Humor, ⁹ Behavioral disengagement, ¹⁰ Restraint, ¹¹ Use of emotional social support, ¹² Substance use, ¹³ Acceptance, ¹⁴ Suppression of competing activities, ¹⁵ Planning.
* Employee, officer, unemployed.

In 2001, in Welch et al.'s study, structured interviews were conducted using the Centre for Epidemiologic Studies Depression Scale, the hemodialysis stressor scale (HSS) and the coping strategy indicator (13). Their results showed that at Time 1 (stress) more psychosocial stressors were associated with greater use of problem-solving, social-support and avoidance coping. Both avoidance coping and more psychosocial stressors at Time 1 were related to depression at Time 2 (onset of depression). Finally, avoidance coping was found to explain much of the relationship between psychosocial stressors and depression. Their conclusion is that research is now needed that explicates the causal relationships among stress, coping and depression in hemodialysis patients. Our study's results support that research is needed both for hemodialysis and peritoneal dialysis patients.

Yeh et al. performed a study in 2008 where the Hemodialysis Stressor Scale measured stressors and the Jalowiec Coping Scale were used to measure coping strategies (1). Hierarchical regression was used to analyse their data. Their results demonstrated that hemodialysis patients with comorbidities had higher levels of stress. Comorbidity had a moderating effect between choice of problem oriented responses and isolated thoughts as coping strategies. These findings show that hemodialysis patients with comorbidities often choose positive coping strategies. Their study's conclusion was that comorbidity not only has a direct impact on stress but also has a moderating effect on the relationship between coping and stress. Comorbidity may hold the key to healthcare professionals' understanding of why patients undergoing hemodialysis perceive different levels of stress and use various coping strategies. A personalized program may be needed for each patient based on the different levels of comorbidity. In our study, 82 (82.0%) patients had additional chronic diseases other than chronic kidney disease, 32.9% had hypertension, and 31.7% diabetes and hypertension. We must be aware of the burden of comorbid diseases on coping methods of our patients.

In 2011, in Harwood et al.'s study, information on stress and coping was obtained using the Chronic Kidney Disease Stress Inventory and the Jalowiec Coping Scale in 226 non-dialysis chronic kidney disease patients (2). The results showed that stressful experiences did not differ between the genders; however, women were more likely than men to report greater use of coping strategies. Significant relationships were observed between higher education and greater coping in bivariable analysis, but not multivariable analysis. In conclusion, it was stated that knowledge of the relationships between sociodemographic factors, stressful experience and coping behaviour is necessary to develop and implement educative and supportive interventions further for chronic kidney disease patients and to provide the foundation for interventional and outcome investigations. In our study, problem orientation and emotional expression, and use of emotional social support mean score was higher in female patients, and 57.0% primary school graduates.

Depression is common in dialysis patients and has been shown to be associated with higher morbidity and mortality (14). Stress coping attitudes of dialysis patients are related with the success of the treatment. Early recognition of the patients' failure of coping problems may prevent the patient from becoming depressed or addicted to alcohol. The patients may be sent for a psychiatric consultation, and depression and alcohol addiction may be prevented by providing the required measures and treatments.

CONCLUSIONS

In our study, emotional-oriented coping attitude was the most frequently used coping attitude in both hemodialysis and peritoneal dialysis patients. Religious coping was the first amongst the emotional coping methods. Future research including more patients may be required to support the results of our study.

ACKNOWLEDGEMENT

The authors declare that they did not receive any funding or support for the present study and that there are no potential conflicts of interest related with it.

REFERENCES

1. Yeh SC, Huang CH, Chou HC: Relationships among coping, comorbidity and stress in patients having haemodialysis. *J Adv Nurs* 2008;63:166-174
2. Harwood L, Wilson B, Sontrop J: Sociodemographic differences in stressful experience and coping amongst adults with chronic kidney disease. *J Adv Nurs* 2011;67:1779-1789
3. Just PM, de Charro FT, Tschosik EA, Noe LL, Bhattacharyya SK, Riella MC: Reimbursement and economic factors influencing dialysis modality choice around the world. *Nephrol Dial Transplant* 2008;23:2365-2373
4. Perales-Montilla CM, Duschek S, Reyes-Del Paso GA: The influence of emotional factors on the report of somatic symptoms in patients on chronic haemodialysis: The importance of anxiety. *Nefrologia* 2013;33:816-825
5. Lazarus R, Folkman S: Stress, appraisal, and coping. New York: Springer; 1984 (versión castellana: Martínez Roca; 1986)
6. Calvanese N, Feldman L, Weisinger J: Estilos de afrontamiento y adaptación al tratamiento en pacientes sometidos a hemodiálisis. *Nefrol Latin* 2004;11:49-63
7. Contreras F, Espinosa JC, Esguerra GA: Calidad de vida, autoeficacia, estrategias de afrontamiento y adhesión al tratamiento en pacientes con insuficiencia renal crónica sometidos a hemodiálisis. *Psicol Salud* 2008;18:165-179
8. Ağargün MY, Beşiroğlu L, Kıran ÜK, Özer ÖA, Kara H: COPE (baş çıkma tutumlarını değerlendirme ölçeği): Psikometrik özelliklere ilişkin bir ön çalışma. *Anadolu Psikiyatri Dergisi* 2005;6:221-226

9. Carver CS, Scheier MF, Weintraub JK: Assessing coping strategies: A theoretically based approach. *J Pers Soc Psychol* 1989;56: 267-283
10. Carver CS, Pozo C, Harris SD, Noriega V, Scheier MF, Robinson DS, Ketcham AS, Moffat FL Jr, Clark KC: How coping mediates the effect of optimism on distress: A study of women with early stage breast cancer. *J Pers Soc Psychol* 1993;65:375-390
11. Bacanlı H, Sürücü M, İlhan T: Başa çıkma stilleri ölçeği kısa formunun (BÇSÖ-KF) psikometrik özelliklerinin incelenmesi: Geçerlik ve güvenirlik çalışması. *Kuram ve Uygulamada Eğitim Bilimleri* 2013;1:81-96
12. Lindqvist R, Carlsson M, Sjöden PO: Coping strategies and quality of life among patients on hemodialysis and continuous ambulatory peritoneal dialysis. *Scand J Caring Sci* 1998;12:223-230
13. Welch JL, Austin JK: Stressors, coping and depression in haemodialysis patients. *J Adv Nurs* 2001;33:200-207
14. Ng HJ, Tan WJ, Mooppil N, Newman S, Griva K: Prevalence and patterns of depression and anxiety in hemodialysis patients: A 12-month prospective study on incident and prevalent populations. *Br J Health Psychol* 2015;20:374-395