

The Relationship Between Psychological Resilience and Social Support Levels in Hemodialysis Patients

Ezgi Karadag¹, Ozlem Ugur¹, Hatice Mert², Merve Erunal²

¹Dokuz Eylul University, Oncology Nursing, İzmir, Turkey

²Dokuz Eylul University, Internal Medicine Nursing, İzmir, Turkey

Address for Correspondence: Ezgi Karadag, E-mail: ezgikaradag44@gmail.com

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Abstract

Purpose: This study was conducted to determine the relationship between psychological resilience and social support in hemodialysis patients in Turkey.

Methods: This descriptive, comparative, cross-sectional, and correlational study was conducted with 100 patients who underwent hemodialysis treatment at a university hospital between September and December 2016. In the study, a questionnaire form including sociodemographic data as well as data regarding the disease, the Resilience Scale for Adults (RSA) and the Multidimensional Scale of Perceived Social Support (MSPSS) were used. For statistical evaluation, the Mann-Whitney U-test, the independent t-test, the Kruskal-Wallis test, and the Pearson's correlation analysis were used for statistical evaluation.

Results: A very strong and significant relationship was found between the multidimensional perceived social support scale and the resilience mean scores ($r=0.78$, $p<0.001$). It was determined that the patients perceived the highest support from their families which was followed by friends and private support respectively.

Conclusion: HD nurses should routinely diagnose the psychological resilience status and social support status of HD patients. Initiatives to promote psychological resilience and mobilize social support resources should be reflected and applied in their nursing care plans.

Keywords: Renal dialysis; resilience; psychological; social support; nursing care.

INTRODUCTION

End-Stage Renal Disease (ESRD) is a chronic condition and requires lifelong dialysis or kidney transplantation (1). It is anticipated that the number of patients with ESRD will increase by about 30% in the world by 2050 (2,3). The most common treatment modality is hemodialysis. In Turkey, according to the 2005 records, a total of 28.507 patients with chronic renal failure (CRF) received hemodialysis treatment, while the number of patients undergoing total hemodialysis treatment increased to 55.890 in 2014 (4).

Hemodialysis treatment differs from other chronic diseases due to both patients' lifelong commitment to a hemodialysis center and the changes it creates in patients' lives in terms of their compliance. Along with the onset of hemodialysis (HD) therapy, some changes occur in the life of the patients as well as their families. In addition to the disease outlook, some biopsychosocial problems may be experienced such as limitations, changes in body image, increased dependence, threat of death, changes in

roles within the family, deterioration of working capacity, financial problems, reduction in social activities, anxiety, depression and decreased self-esteem (1,5).

The fact that HD patients are obliged to connect to the HD machine in the healthcare facility on certain days and hours of the week causes them to become dependent on the machine, the institution and the healthcare staff, thus causing loss of independence. This dependence create problems in the patient's family, work, social life and negatively affect the quality of life (1).

The psychological resilience level of HD patients who have different sources of stress is expressed as an important form of self protecting (6). Psychological resilience generally refers to a process of success or adaptation. In this context, psychological resilience is regarded as a person's adaptation to significant stress sources such as trauma, threat, tragedy or familial and relational

problems, severe health problems, workplace and financial problems (7). In many studies, social support has been found to be an important parameter affecting psychological resilience (8-11).

Social support is the degree to which people can benefit from social resources through the relationships that they trust. Elements which have an important place in individuals' lives such as spouses, partners, friends, family, teachers, relatives, neighbors, experts, health professionals, associations and institutions constitute the social support resources of those individuals (9).

In stressful situations, individuals' attachments to the social environment, work, family environment, interpersonal relationships, beliefs and values can be observed in all aspects of life and this provides a necessary source of strength for individuals to cope with stressful life situations and increases their psychological resilience (10).

The social support resources that individuals possess remove the risk of physical and psychological illnesses by preventing the occurrence of stressful life events. When individuals are confronted with stressful life events, meeting basic social needs such as love, compassion, belonging to a group, mental, material and emotional consolation has a direct effect on mental health (11). On the other hand, social support and psychological resilience can affect each other bi-directionally. Increased psychological resilience may cause individuals to establish a more positive social support network (12).

Nurses' diagnosis of the psychological resilience/social support status of HD patients and the affecting factors leads to a functioning social support system for the patients and may be effective in increasing their well-being. Thanks to this diagnosis, nurses can plan nursing interventions that can be effective in increasing psychological resilience and offer effective care. However, in Turkey, there are no studies that has a reached a result explaining the relationship between psychological resilience and social support in HD patients and there is some inadequate research abroad. Besides that, the consultation-liaison psychiatric nurse has important roles in diagnosing the problems that HD patients have in this area and integrating medical and psychiatric aspects of care (13). In this sense, the consultation-liaison psychiatric nurse and the hemodialysis nurse should plan nursing interventions by recognizing the problems in cooperation. However, the inadequacy of this structure brings with it the inability to diagnose the problems. This study can be effective in revealing this need and raising awareness. For this reason, this study will provide new data for the literature regarding this issue. This study was planned with the aim of assessing the level of psychological resilience and social support regarding HD patients and determining the relationship between psychological resilience and social support in patients.

MATERIALS AND METHODS

Design and Sample

This descriptive and cross-sectional study was conducted at a university hospital between September and December 2016.

The study population consisted of patients who underwent hemodialysis treatment in the hemodialysis unit. The total number of patients receiving HD therapy is not known, as HD patients receiving routine treatment in the hemodialysis unit, as well as for emergency treatment, inpatients and outpatients from various cities, come to the HD unit for treatment. Therefore, unknown-population sample selection formula was used to calculate sample size. The sample size was calculated using the unknown-population sample selection formula ($n=t^2 \cdot p \cdot q / D2$) and the study was conducted with 100 patients.

The criteria for the inclusion of patients in the study were determined as: a) having received regular hemodialysis treatment for at least 6 months, b) being 18 years of age or older, c) not having a mental confusion or not having any psychiatric problem, d) not having problems with hearing-vision-speech, e) volunteering to participate in the research.

Data Collection Tools

In the study; a questionnaire form consisting of a total of 13 questions about sociodemographic data as well as data regarding the disease, the Resilience Scale for Adults (RSA) and the Multidimensional Scale of Perceived Social Support (MSPSS) were used. The questionnaire, the RSA and the MSPSS were administered to the patients during hemodialysis sessions.

Questionnaire on Socio-demographic Characteristics and Disease

This form was prepared by the researchers after a review of the literature (5, 14, 15). Socio-demographic data were collected with 8 questions about age, gender, marital status, education status, employment status, cohabitation status, income status and social security status and data on the disease were collected by 5 questions about duration of chronic renal failure, duration of hemodialysis, frequency of dialysis and presence of chronic illness other than chronic renal failure.

Resilience Scale for Adults (RSA)

The resilience scale for adults was developed by Friberg et al. (2005) and translated into Turkish by Basim and Çetin (2011).

The scale has 33 items is comprised of six factors; structured style, perception of future, family cohesion, perception of self, social competence and social resources. In this study, total scale score was used and no analysis was done with factors. The evaluation of the scales was left to the users' preference as in the original study. The five boxes next to the answers which were prepared to avoid the acquaintance bias can be taken as a five-point Likert and evaluated in the desired way. If the psychological resilience is supposed to increase as the scores increase, the answer boxes should be evaluated as 12345 from left to right (6, 7, 16, 17). In this study, the evaluation was based on the relation in which the increase in the scores indicated increased psychological resilience. While the total Cronbach alpha coefficient of the original scale is 0.83, the total alpha internal consistency coefficient was found to be 0.96 in this study (7).

Multidimensional Scale of Perceived Social Support (MSPSS)

It is a scale developed by Zimet et al. (1988) which determines

the elements of social support perceived by individuals. The scale consisting of a total of 12 items is a Likert type scale with 7-point rating scale ranging from “strongly disagree” to “strongly agree”. The scale has three subscales consisting of four items to determine the support from family (items 3, 4, 8 and 11), friends (items 6, 7, 9 and 12), and significant other (items 1, 2, 5 and 10). The lowest score that can be taken from the subscales is 4 while the highest score is 28. The lowest score to be obtained from the total scale is 12 while the highest score is 84. If a high score is obtained, it indicates that the perceived social support is high (18, 19). The Turkish reliability and validity study of the scale was conducted by Eker and Arkar (1995) who found that the reliability coefficients of the scale had high consistency levels ranging from 0.80 to 0.95 (20). In this study, the total internal consistency coefficient α was found to be 0.95 while it was found to be 0.95 for family, 0.92 for friend and 0.96 for significant other.

Research Ethics

After consent was obtained from a university hospital for the execution of the study, an application was made to a university Ethics Committee for Non-Interventional Studies and a consent from the ethics committee was obtained (Ethics committee no: 2016/24-37). The patients included in the research were informed about the study, and informed consent as well as oral consent were obtained.

Data Analysis

Statistical analyzes were conducted with Statistical Package for the Social Sciences (SPSS Inc., Chicago, IL, USA). In the analysis of the data, percentage, the independent t test, the Kruskal-Wallis test, the Mann Whitney-U test, the Pearson’s correlation analysis and Cronbach alpha internal consistency tests were used.

RESULTS

Sample characteristics

The mean age of the participants in the study was 57.16±15.52 and 61% was male. Most of the patients were married (75%), primary school graduates (63%), not working (86%) and half of them live with their spouses and children. The majority of the patients stated that their income was equal to their expenses and that they all had social security. The vast majority had additional chronic disease. The mean CRF diagnosis duration of the patients was 56.87±64.25 months and the mean duration of hemodialysis was 38.19±43.72 months (Table 1). All of the patients were in the fifth stage of the disease and undergo dialysis three times a week.

Comparison of Multidimensional Perceived Social Support Scores and Psychological Resilience Scores with Some Descriptive Characteristics of Patients

The mean scale score for the social support perceived by the patients was found to be 57.44±21.08 while it was 21.54±7.53 for family, 18.44±8.06 for friends and 17.46±8.94 for significant others, respectively. The mean score of patients for the Resilience Scale was 114.94±32.57.

A statistically significant difference was found between multidimensional perceived social support scale and other

Table 1. Descriptive sample characteristics (n=100)

Characteristics	\bar{X}	SD
Age (min-max= 20-87)	57.16	15.52
Duration disease (month)	56.87	64.25
Duration hemodialysis (month)	38.19	43.72
	n	%
Gender		
Female	39	39
Male	61	61
Marital status		
Married	75	75
Single	25	25
Level of education		
Primary school	63	63
Secondary school	37	37
Work status		
Yes	14	14
No	86	86
The presence of insurance		
Yes	100	100
No	0	0
Income status		
Bad	17	17
Medium	66	66
Good	17	17
Status of coexistence		
Alone	12	12
With spouse	23	23
With children	5	5
With spouse and children	51	51
With parents	9	9
The presence of other chronic diseases		
Yes	74	74
No	26	26
Total	100	100

subscales except for the educational status from the descriptive characteristics of patients and perceived social support from family subscale (p<0.05). A statistically significant difference was found between income status, multidimensional perceived social support scale and all subscales (p<0.05) (Table 2). No statistically significant difference was found among the multidimensional perceived social support scale and its subscales (p>0.05) and other descriptive characteristics (Table 2).

Although it is not shown in the table, when the relationship between age and multidimensional perceived social support scale was examined, a significant relationship with a negative correlation was found among family (r=-0.23, p<0.05), friend (r=-0.30, p<0.05), significant other (r=-0.25, p<0.05) and total support (r=-0.30, p<0.05) as a result of the correlation analysis conducted. There was no statistically significant correlation between the duration of CRF diagnosis and duration of hemodialysis with multidimensional perceived social support scale and subscales (p>0.05).

A statistically significant difference was found between the educational status and income status of the patients participating in the study and the total score of psychological resilience scale

Table 2. Comparison of mean scores of Multidimensional Scale of Perceived Social Support (MSPSS) and Resilience Scale for Adults (RSA) with respect to descriptive sample characteristics

Sociodemographic characteristics	Scores of MSPSS						Scores of RSA			
	Family support		Friends support		Special person support		Total support		Total score	
	X±SD	P-value	X±SD	P-value	X±SD	P-value	X±SD	P-value	X±SD	P-value
Gender										
Female	21.62±6.99	0.937 [†]	18.28±8.44	0.876 [†]	18.38±8.81	0.411 [†]	58.28±20.45	0.751 [†]	118.38±30.37	0.401 [†]
Male	21.49±7.92		18.54±7.88		16.87±9.05		56.90±21.63		112.74±33.98	
Marital status										
Married	20.88±7.73	0.101 [†]	18.80±7.74	0.523 [†]	17.57±8.70	0.758 [†]	57.25±21.58	0.905 [†]	113.05±34.59	0.711 [†]
Single	23.52±6.67		17.36±9.04		17.12±9.80		28.00±19.92		120.60±25.40	
Level of education										
Primary school	20.51±7.69	0.074 [†]	17.08±7.90	0.027 [†]	15.89±8.49	0.021 [†]	53.48±20.97	0.013 [†]	108.97±33.89	0.016 [†]
Secondary school	23.30±7.01		20.76±7.89		20.14±9.17		64.19±19.77		125.11±27.78	
Work status										
Yes	22.50±6.68	0.931 [†]	19.71±6.89	0.761 [†]	20.00±5.87	0.654 [†]	62.21±15.57	0.609 [†]	125.29±28.43	0.235 [†]
No	21.38±7.69		18.23±8.25		17.05±9.31		56.66±21.82		113.26±33.05	
Income status										
Bad	15.71±7.03	0.001 [§]	14.65±6.81	0.012 [§]	13.59±6.85	0.030 [§]	43.94±18.07	0.001 [§]	85.41±29.07	0.000 [§]
Medium	21.89±7.62		18.15±8.34		17.38±9.04		57.36±21.45		116.14±31.02	
Good	26.23±2.39		23.35±5.62		21.65±9.01		71.24±12.58		139.82±14.94	
Status of coexistence										
Alone	20.58±8.01	0.977 [§]	15.92±8.18	0.140 [§]	18.75±8.78	0.056 [§]	55.25±19.58	0.284 [§]	111.75±27.86	0.660 [§]
Spouse	20.35±8.36		18.13±8.07		14.52±8.82		53.00±22.02		108.78±36.17	
Children	20.80±8.93		10.80±9.52		10.00±8.25		41.60±23.36		106.40±35.36	
Spouse and children	21.37±7.35		19.31±7.56		19.14±8.32		59.82±20.95		116.10±33.35	
Parents	27.22±1.56		21.89±8.10		17.89±8.10		67.00±16.27		133.11±18.57	
The presence of other chronic diseases										
Yes	21.01±7.89	0.286 [†]	17.97±8.10	0.348 [†]	16.81±9.04	0.334 [†]	55.80±21.94	0.285 [†]	111.86±33.39	0.144 [†]
No	23.04±6.33		19.77±7.96		19.31±8.56		62.12±18.02		123.69±28.98	

†, t-test; ‡, Mann-Whitney U test; §, Kruskal-Wallis test; MSPSS, multidimensional scale of perceived social support; RSA, resilience scale for adults.

($p < 0.05$). There was no statistically significant difference between the other descriptive characteristics and the total score obtained from the resilience scale ($p > 0.05$) (Table 2).

Although it is not shown in the table, a significant correlation was found between age and the total score obtained from the resilience scale ($r = -0.31$, $p < 0.05$). There was no statistically significant correlation between duration of CRF, duration of hemodialysis and resilience scale ($p > 0.05$).

Relationship Between the Mean Scores of MSPSS and RSA

In this study; it was found that there was a very strong and significant positive correlation between the mean scores obtained from the multidimensional perceived social support scale and the resilience scale ($r = 0.78$, $p \leq 0.001$).

A very strong and significant positive correlation was found between psychological resilience and family support ($r = 0.82$, $p < 0.001$), friend support ($r = 0.69$, $p < 0.001$), significant other support ($r = 0.53$, $p < 0.001$), and total support ($r = 0.78$, $p < 0.001$). It was determined that patients with high psychological resilience obtained high mean scores of support from family, friends, significant other and total support (Table 3). As the scores of perceived social support from family, friends and significant other increase, the resilience scale score increases.

DISCUSSION

It was determined that patients who were included in the scope of the study perceived the highest social support from their families which was followed by friends and significant others, respectively. In similar studies conducted with HD patients, it is seen that the score obtained from perceived social support from the family was higher (5, 15, 19–22, 24). Families play an important role in terms of offering unconditional love and sacrifice. The social support they provide enables patients to cope with the disease and related problems more easily and maintain disease management more effectively (5, 15, 21, 22, 24). In cultures where the traditional family structure continues as in Turkey, families demonstrate a protective attitude and have an important place as a source of social support.

In the study, a statistically significant difference was found between the total score obtained from the MSPSS and its subscales except for the educational status of the patients and the perceived social support from the family subscale. The social support mean scores of the patients with higher educational level was higher. Karabulutlu et al. (2005) found that increase in the level of education also increased the perceived social support (21). The increase in the level of education makes it easier for the individual to earn respect, to interact with the social environment,

Table 3. Relationship between the mean scores of MSPSS and RSA

	Multidimensional Scale of Perceived Social Support		Subscales of Multidimensional Scale of Perceived Social Support					
			Family Support		Friends Support		Special Person Support	
Resilience Scale for Adults	r	p	r	p	r	p	r	p
	0.78	0.000	0.82	0.000	0.69	0.000	0.53	0.000

to ensure respectability in the society, and to be able to cope with economic and social difficulties. Education may be regarded as one of the variables affecting the perceived social support of the individuals and enhancing their ability to establish relationships.

In this study, the mean social support scores of the patients with high incomes were found to be higher. Similarly, in a study conducted with patients hospitalized in clinics, Arslantaş et al. (2010) found that high level of social support is associated with high level of income, as did Karakoç and Yurtsever in a study conducted with cancer patients (2010) (25, 26). Since economic opportunities help solve many life problems and provide access to social facilities and significant other support, it is likely to have such results.

In this study, as the age increased, the social support mean scores were lower. Karabulutlu et al. (2005) and Tan et al. (2005) did not find a significant relationship in their studies (21, 22). As the age increases, the social communication networks of individuals may weaken and particularly due to family members' leaving home may cause the perceived social support from family to be low.

A statistically significant difference was found between the educational status of the patients participating in the study and the resilience scale total score. The mean score of the patients with higher educational level was higher. A similar significant correlation was found by Dane and Olgun (2016) in their study conducted with HD patients (6). In the study of Kim and Evangelista (2010), it was determined that patients with higher educational level tended to perceive that they could control the negative consequences of their illness based on lower scores in the personal control dimension (27). Being literate and having a high level of education positively affect health literacy and enable the individual to solve problems more easily, make decisions, and actively use the communication skills necessary to achieve environmental compliance. The higher the level of education, the higher the income of individuals which causes less encounters with financial problems etc. and provides them with better quality of life acting positively on psychological resilience (28).

In this study, a statistically significant difference was found between income status and resilience scale total score. Patients with high incomes obtain higher mean scores. Dane and Olgun (2016) found a different result in their study (6). This is an expected result. It could be stated that a higher income status increases individuals' accessibility to social resources and their resilience against the financial costs of long dialysis treatment. Furthermore, income status is also considered to be an environmental variable that affects psychological resilience.

In this study, as the age increases, the level of psychological resilience decreases. In this study, the long-term exposure to HD therapy and related problems due to age, increasing dependence in daily life and the presence of comorbid conditions due to age may have reduced the psychological resilience of patients. Kocaman Yıldırım et al. (2013) found that levels of anxiety and depression were higher, perception of the disease was more negative and that emotional symptoms such as anxiety, fear, sadness and anger were experienced more intensely in patients with higher mean age (29).

In this study, as the perceived social support score increases, the resilience score also increases. This is an expected result. Researches have shown that social support affects mental health in a positive and direct way, reduces stress with its buffering characteristic and has a positive effect on mental health (17, 30, 31). Inadequate social support is effective in increasing psychosocial problems in dialysis patients. Psychosocial problems and inadequate social support are considered to have brought along ineffective coping. On the other hand, social support plays a protective role against physical and mental health hazards (21).

The social support resources that individuals possess minimize the risk of physical and psychological illnesses by preventing the occurrence of stressful life events (8). The most important function of social support is to act as a buffer by reducing or balancing the psychological damage caused by stressful life events and ongoing difficulties of life. However, when individuals are confronted with stressful life events, meeting basic social needs such as love, compassion, belonging to a group, mental, material and emotional consolation has a direct impact on mental health (10, 15). Social support that individuals receive from the family and outside the family enables them to control stressful situations and their potential negative consequences, and help them develop a positive perception of the future by providing them with the feeling of having company. On the other hand, a high level of psychological resilience helps individuals mobilize their social support resources.

CONCLUSION and SUGGESTIONS

In this study, it was found that there was a very strong and significant positive correlation between psychological resilience and that social support was an important factor acting on the psychological resilience of patients. It was determined that the patients perceived the highest support from families which was followed by friends and private support respectively.

HD patients need more psychological and social support; therefore, hemodialysis patients whose social support systems are inadequate suffer more from the effects of the disease and their psychological resilience is affected.

HD nurses have an important responsibility to assist HD patients in resolving the problems they are experiencing and in promoting social support systems for the benefit of patients as well as increasing the psychological well-being of patients. The HD nurse should first establish a trust relationship with patients, evaluate them as a whole and also from a psychosocial aspect, and mobilize support resources when necessary. Care should be given to the preparation of patient and family training programs on the effectiveness of social support, the organization of informational and supportive counseling services and the formation of support groups for the development of social support skills for families.

It may be suggested that HD nurses reflect and implement interventions to increase psychological resilience and mobilize social support resources in nursing care plans. HD nurses should routinely diagnose the psychological resilience and social support status of HD patients. It may be suggested that future studies be conducted with larger sample groups and different disease groups and that interventional studies be conducted to increase the psychological resilience of HD patients and the effectiveness of social support.

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LIMITATIONS

Our findings can not be generalized to patients with HD patients in Turkey or other regions because participants were selected from a single center. These may be limitations of study.

Informed Consent: Written informed consent was obtained from patient who participated in this study.

Peer-review: Externally peer-reviewed.

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